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BALTIMORE, DECEMBER 17, 1908.

SLEEPING ON BILLIONS.

In a letter to the MANUFACTURERS' RECORD Mr. Paul T. Brady of the Westinghouse Company of New York writes:

I have read your article on the editorial page, entitled "Acres of Diamonds." The banker who made the statement that "the South is sleeping on billions of values" told the truth. I do not believe, however, with the start you have made as shown in the pamphlet entitled "Results—The South—Resources," and the showing you are making in the MANUFACTURERS' RECORD, they will sleep very long. I can promise you that if they are disposed to sleep that intruders and trespassers from other climes will soon waken them.

Mr. Brady has exactly stated the case. The South has billions of values, and to some extent it has been sleeping on these values. Many of its people have been vigorously at work producing here and there what looked like great results, but what are really infinitesimally small as compared with the billions on which we are still sleeping. The South has undeveloped wealth sufficient to give profitable employment to every man and boy in all the territory from Maryland to Texas. The hundreds of thousands of poorer people in the mountain regions and elsewhere, who have suffered because of lack of employment, who by reason of this lack and the poverty connected therewith have likewise

lacked educational opportunities, can all find an abundance of profitable employment when once we have really seriously taken hold of the utilization of the billions of values now unutilized. Beneath the mountains over which these people have for generations lived in poverty because of the lack of work, there are resources great enough to give profitable work to many times as many people as now live in that district—resources great enough to enrich not only these people, but many millions of others. There is no greater work open to any man in the South, no work that means more for betterment in educational and religious advancement, as well as in that of material prosperity, than that which seeks to turn the capital of the country into the development of these billions of buried talents. Of itself the South would not be able within the next 50 years to accumulate sufficient capital to develop these resources to a point at all commensurate with their extent and with the needs of the people. But with the bringing of capital from other sections into the South—and the capital which comes not from motives of charity or philanthropy, but on the purely selfish basis of seeking a profitable investment—there is room for almost unlimited progress. Why should the people of the present generation pass away and still another generation come and go lacking work, lacking prosperity, when by the utilization of capital from elsewhere prosperity such as this section has never seen can be brought about so that the present generation can get the benefit of it?

MOSES H. CONE.

The South cannot afford to lose many men of the character of Moses H. Cone of Greensboro, N. C., who died last week. Though of a family long identified with Baltimore, Mr. Cone was born in Tennessee. He began his business life as a clerk in a dry goods house at Lynchburg, Va. Then he became associated with his father in a wholesale grocery house in Baltimore, and as traveling representative of that built up a wide business acquaintance in North Carolina. Establishing in 1890 in New York the Cone Export & Commission Co., which has since become one of the largest distributors of cotton fabrics in the trade, he removed the selling office to Greensboro in 1895. He and his brother, Caesar Cone, had in the meantime become interested in the textile industry at Greensboro, and that interest resulted in the important place which Greensboro occupies in the Southern cotton-manufacturing field. He did not stop at mere material results for his own business, but was keenly alive to the welfare of his employees, and was active and progressive in all that concerned Greensboro's development. In him were combined in a notable degree the broadest kind of public spirit and the widest kind of personal benevolence of the modest and most effective form. North Carolina will miss him.

\$500,000,000 BONDS FOR WATERWAYS IMPROVEMENTS.

On February 1, 1906, in seeking to impress upon the country the need of a broader view than it had taken as to the importance of developing its transportation facilities, having especial reference at that time to the development of the rivers and harbors of the country, the MANUFACTURERS' RECORD said:

If it were possible by the touch of some magic wand to bring about over night the completion of all the river and harbor work which has for years been projected, and upon which the Government has annually spent a few paltry millions of dollars, it would be recognized that the annual saving to the country would far exceed the total cost of all the work. If the investment necessary to do this be \$500,000,000, the country would be benefited to a much greater extent in net earnings than this \$500,000,000, in addition to the tremendous expansion in every line of human activity which would follow as a natural result. * * *

Great as may be the future value of the Panama Canal, revolutionizing upon the world's trade as its effect may be, well worth, when completed, if done within a reasonable time, the \$400,000,000 or \$500,000,000 which it will possibly cost, the worth of the Panama Canal will not be so great as would be the fullest development of our vast river system, furnishing ample water transportation for the increasing traffic of the country. * * *

Then why not let the American people demand the immediate issuance of low interest rate bonds to a sufficient extent, whether that be \$500,000,000 or more, to carry out as rapidly as the work can be judiciously handled the full improvement of the Mississippi and the Ohio and all their tributaries, the construction of the inland waterway connecting the Hudson River and the Gulf, the Chicago and Mississippi Canal, the great works needed on the Pacific Coast and on the rivers of the South, and all the other river and harbor work, the importance of which has been fully recognized by the National Government? * * *

In the light of these facts, the MANUFACTURERS' RECORD suggests to the country that it give serious consideration to the issuance of sufficient bonds, \$500,000,000, more or less, as may be needed to carry out a broad plan of river and harbor improvements, in order that this generation may get the vast benefits to be derived from them, since the increased profit to the country by this work would almost certainly annually exceed the total investment.

That suggestion called forth a number of letters from leading business men and from some members of Congress. Some strongly favored the issuing of bonds, though several Congressmen opposed the idea. Some few members of the Rivers and Harbors Congress thought that the ground taken by the MANUFACTURERS' RECORD was too much in advance of the sentiment of the country on the subject, and some of them in private conversation expressed the opinion that a suggestion of so broad a nature might do harm by the magnitude of the amount of money mentioned as necessary to be expended in this work. The position of the MANUFACTURERS' RECORD, which so far as we know made the suggestion of \$500,000,000 bond issue in advance of any other publication or any individual in the country, has been justified. President Roosevelt, in an address last week discussing this subject, said:

Our natural resources are so related that the use of one affects the use of all the others. This is especially true of our waterways. We have neglected our waterways more than any other natural resource, and we must put an end to that neglect. The Inland Waterways Commission has told us how.

First, let us prepare a comprehensive plan for inland waterway development along the lines pointed out by the commission. Such a plan must consider every use of the waters; it must put the interests of all the people in advance of any private interests whatsoever. The preparation of this comprehensive plan should begin at once.

Second, let us proceed immediately with the construction of the waterways for which plans have already been approved and which we are now certain will fit into the outlines of the general plan. Our previous policy of procrastination, delay and fitful and partial action has borne its perfect fruit. Our waterways are deserted, and in return for our vast expenditures we have little or no actual navigation to show. The people are ready for a change. Let us have it, and at once. If we can pay the cost from current revenues, let us do so. If not, let us issue bonds. By either method let us have the waterways, and that quickly. The plan and the work can and should proceed together. While the work we are sure of is being begun the plan for the rest can be prepared.

There must not be the slightest recklessness or waste of money. No work whatever should be undertaken that has not been thoroughly examined and fully approved by competent experts. Above all, not one cent should be expended to satisfy special interests, whether of a business or a locality, or to promote any man's political fortunes. Forests and waterways cannot be separated in any successful treatment of either. Forest protection and river development must go hand in hand.

President-elect Taft has also put himself on record in favor of issuing bonds for river improvement work, and Mr. Carnegie, in his address in Washington a few days ago, said:

I was delighted to hear the President and the President-elect yesterday advocate the issuing of bonds for this great work, and to hear Vice-President Fairbanks indorse their sentiments this morning. The policy of issuing bonds needs no more proof. The improvement of our waterways will give back to the country tenfold the money expended.

On that point the National Rivers and Harbors Congress at its meeting last week at Washington resolved that:

The Congress of the United States should at its present session authorize the issuance of bonds of the Government to an amount of \$500,000,000, to be sold from time to time in such quantities as may be necessary, the proceeds of same to be used in the payment exclusively of such river and harbor work as shall be authorized by Congress; the provisions for the issuance of said bonds to be similar to those authorizing the bonds for the construction of the Panama Canal.

This is exactly the position taken by the MANUFACTURERS' RECORD nearly three years ago.

In this case, as in many others, the wisdom of the views of the MANUFACTURERS' RECORD, though in advance of others, has been confirmed. More than a year before Mr. James J. Hill put forth his estimate, the MANUFACTURERS' RECORD had taken the ground that \$5,000,000,000 was needed for the development of our railroad facilities to meet the growing traffic of the country. As the whole country

has now accepted the correctness of our statement made several years ago, and constantly reiterated, that \$5,000,000,000 is needed for railroad expansion, so the position of the MANUFACTURERS' RECORD three years ago, that the Government should issue \$500,000,000 of bonds for river and harbor improvement, is accepted by the country at large as the wise thing.

If we would rightly understand the necessity for river and harbor improvement, as well as for railroad expansion, we must understand something of the rapidity of the world's material development, and more especially something of the growth of this country and the foundation on which we are building. The vastness of our resources is beyond comprehension. With eight or nine times as much coal as all of Europe, with more known iron ore than is known of in the rest of the world, with nearly three-fourths of the world's cotton crop, with nearly one-half of the world's iron and coal production, with a population of nearly 90,000,000 of the most active, virile, energetic people on earth, increasing at the rate of 18,000,000 or 20,000,000 every 10 years, we have possibilities for expansion beyond the power of the mind to fully grasp. With resources which have scarcely been touched, with a development, vast as it is, scarcely begun as compared with what the future is to show, here is a field broad enough and great enough for all the energy and all the capital of the 90,000,000 people now living here, and of the 150,000,000 that will be living here within 30 years. With a land area of about 6 per cent. of the world's land area, and a population of about 5 per cent. of the total of the world, we have resources sufficient to enable us to create an industrial business greater than that of the entire world at present. Within the next 10 or 15 years our coal output will equal the world's coal production at present. Within that period we shall probably be producing between 50,000,000 and 60,000,000 tons of pig-iron, against the 60,000,000 tons which the world is now producing. Within 10 or 15 years we shall in all probability have more than doubled the entire freight traffic of the country, and if this is not done, the only reason will be the inability of our railroads and rivers to furnish adequate transportation. Within a short time business will again be ahead of railroad facilities and we shall have freight congestions, with their attendant losses to all business interests.

If we would utilize the marvelous, the really incomprehensible natural resources, the geographical location and climatic advantages which Nature has given to us, we must as quickly as possible improve our rivers, dig canals and deepen our harbors. Our policy in this respect in the past has been niggardly in the extreme. Because of this, and because we wilfully failed to forecast the growth of the country, the railroads were broken down by a volume of traffic far in excess of their ability to handle. We have sought to regulate freight rates by laws, when they could have been better regulated by the development of waterways and the cheaper transportation which waterways would provide. If an inhabitant of some other world could look down over the situation and see what Nature has done for our country in its rivers and harbors, and see how we have permitted these rivers to be unutilized, he could but be amazed at this condition and feel that surely the people of the United States lacked the energy and the broad business ability which we have claimed for ourselves. He would see that Mexico and South America, as well as the older countries of Europe, are far ahead of us in the recognition of the importance of spending money in the development of water transportation. As he surveyed the situation he would be compelled to return to his distant home convinced that in one of the most essential things connected with national progress the people of the United States are behind all others in the world, except possibly a few Oriental countries, of which China is an example.

It is everywhere accepted without question that the railroads must raise as a minimum \$5,000,000,000 to adequately increase their facilities to handle the traffic of the country, and that even if this amount were now available, before it could be expended traffic would have gone beyond the facilities thus provided, and still more capital would be needed. And yet while calling upon the railroads to raise \$5,000,000,000, the people of the country have not been willing to see the National Government raise \$500,000,000 for the betterment of the waterways of the country. We say the people have not been willing, for if they had been willing they would have demanded this with the vigor its importance justified, and Congress would long ago have heeded their call.

Many members of Congress have seen the situation and have fully appreciated the importance of this work, but until the present time there has been no such overwhelming demand from the country at large as would have justified Congress in taking this step in advance of the real views of the country. At last the people, North and South, East and West, have awakened to the critical need for the improvement of waterways, and to the limitless possibilities which will be created by the development of our rivers and harbors, the enlargement of the traffic which will be the outcome, the better regulation of freight rates through this competition and the very great reduction which would inevitably come about in lowering freight rates for the heavier classes of goods. With the country awakened to the subject, with President Roosevelt and President-elect Taft vigorously pressing this matter upon the attention of Congress, it is reasonable to believe that what the MANUFACTURERS' RECORD suggested in 1906 will be accomplished, and bonds sufficient for river and harbor work be issued in the not distant future. But the people must keep up the fight. The victory is not fully won.

CONCRETE IN THE SOUTH.

In a recent statement about work now being done in Florida by the Turner Construction Co. of New York it is said:

The South probably offers a better field for reinforced concrete construction than any other part of the United States.

This statement, which we believe voices the views of one of the large contracting houses of the country, doing construction work in all parts of the United States, emphasizes what the MANUFACTURERS' RECORD has repeatedly said about the possibilities of concrete work in the South. It is an interesting

fact that many of the large contractors who have heretofore confined their attention to a considerable extent to the North and West are now turning their thought to the South as a field of operation. The large development work which is already going on in the South, and which must be very greatly increased with the return of more active business conditions, such as the construction of office buildings, of warehouses, of hotels and other buildings of reinforced concrete, is one of the most striking phases of the progress of this section. What the South is doing in

this respect is admirably illustrated incidentally in the brief story from Mobile two weeks ago, in which the completion of the Battle House at a cost of \$1,500,000 was reported, attention being called in the letter to the fact that Mobile, with a city of 55,000 people, had three modern hotels, this last one ranking in every detail with the really great hotels of cities of ten times Mobile's population. Many other Southern cities are making similar progress in hotel construction, while office building work is illustrated in the fact that Birmingham now has under way four modern skyscraper office buildings, which will give nearly 1200 rooms as an addition to the office capacity of the city. In every part of the South this heavy construction work of reinforced concrete is making progress, and it is an interesting fact that the large contracting firms recognize this condition and are taking the position that the South is the best field in the country for reinforced concrete work.

THE ONCE DISCREDITED SOUTH NOW THE CENTER OF BUSINESS EXPECTATION.

Hon. J. T. Watkins, member of Congress from Louisiana, recently asked the MANUFACTURERS' RECORD for some specific information about the South. In replying we sent him several pamphlets issued during the last year or two, giving not only the information he desired, but an elaboration of the specific things he wished to have. Acknowledging the receipt of these data, Mr. Watkins says:

While I know that the MANUFACTURERS' RECORD was fully in touch with all the material interests of the South and would be the best source from which to obtain the information I desired, I had not expected so great a favor as has been extended, and most heartily thank you.

This letter prompts us to give a few facts about the work of the MANUFACTURERS' RECORD during the last two weeks, for instance, as illustrating what it is constantly doing to spread broadcast throughout the world a knowledge of the South. In the first place, it has furnished data within the last few weeks for seven or eight addresses before commercial organizations by prominent men. This it has been doing regularly for the last 25 years, always holding itself in readiness to furnish to public men North and West, magazine writers, to editors and others, of course without cost to them, full information about everything that they might desire to know in regard to the South.

Within the last two weeks it has sent to Northern bankers, investors and leading business men likely to be interested in the South as a field for investment or for manufacturing, over 12,000 personally addressed and personally signed letters.

In the same time it has given away and mailed over 10,000 copies of its most recent pamphlet about the South—"Results—The South—Resources"—of which 1000 copies went to the leading newspapers of the country, in order to furnish to them data for articles about the South. In addition to this it has sent out a great many thousands of leaflets and other literature dealing with the South and giving facts about the progress of the South.

This is but a sample of the work that it is doing at all times, and which it has for years been carrying on. Not a day passes without the MANUFACTURERS' RECORD seeing direct and specific results of its work for the good of the South through investments in that section,

through the movement to the South of business men, manufacturers and farmers. There is no limit to the possibilities of such a campaign. The field in which to work is as broad as the field of Southern opportunity.

The building up of the South is like the building up of a great business—it needs the widest possible advertising. The development of a great industry, or a great department store, through advertising is for the benefit of the individual owners. The building up of a great country like the South, through advertising, is for the benefit of every man, woman and child living in that region. Each one is a shareholder in the ownership of the whole South. Every step of progress made in the South enhances the value of the property held by these 26,000,000 shareholders, broadens the field for their work, increases the opportunity for their boys and girls, as well as for men and women of an older age. Every dollar wisely expended in making known to the world the opportunities of the South and drawing to this section the capital and energy from other sections is a blessing to the whole South and to every shareholder in the ownership of the South. For 25 years the MANUFACTURERS' RECORD, in season and out of season, has been making this campaign. Years ago it was regarded by many, North and South, as visionary in its estimates of Southern resources and Southern potentialities. Its statements about the iron and steelmaking possibilities of Alabama were ridiculed by the foremost experts of the North. Its claims as to the ability of the South to develop a great cotton-mill industry in competition with New England and with old England was ridiculed by the foremost economists in that industry. Our good old friend, Mr. Edward Atkinson, an enthusiast upon the South in some subjects, urged that we should cease to advocate cotton-mill building in the South, taking the ground that it was far wiser for that section to confine itself to cotton production than to attempt to develop an industry for which it was not fitted, viz., cotton manufacturing. The claims of the MANUFACTURERS' RECORD as to the advantages of South Atlantic and Gulf ports for the development of foreign trade were pronounced chimerical by the best authorities of the East. And so it was all along the line. With but little more than a quarter of a century to its credit, the MANUFACTURERS' RECORD has lived to see its predictions more than fulfilled, to see the best experts of the world, backed by the greatest aggregation of capital in the iron and steel industry, admit the future supremacy of the South in iron and steel. It has lived to see New England cotton-mill people, who were skeptical about the South's advantages, heavy investors in Southern mills, and many of them owners of large mills in this section. It has seen the development of Southern ports go forward at a rate that still arouses the jealousy of the East. It has seen the discredited South become the center of the thought of the whole country, and accepted by the foremost financiers and business men of America as the predestined center of the greatest industrial and commercial activity of this or any other land.

In the campaign which it has ceaselessly waged during these 25 years it has carried through special copies of the MANUFACTURERS' RECORD, through pamphlets and through letters the story of the South and of the South's resources to every part of the globe. As it sees how others are now joining in

this work from different quarters it rejoices in the knowledge that for more than a quarter of a century it has never wavered, never for a moment doubted that the South's victory would be won, never halted at any expense within its power to push the story of Southern resources and Southern potentialities into tens of thousands of business houses and of private homes in the North, in the West and in foreign lands.

A LIGHT SET ON A HILL.

In an earnest plea for an increase in the endowment of Hampden-Sidney College, Virginia, made at the opening of the one hundred and thirty-third session of that great old institution, acting president William H. Whiting, Jr., said to the alumni:

First—The future of the College is in your hands. The bulk of the financial aid which she needs must come from you.

Second—If this effort fails, serious disaster in some form must follow.

Some self-denial, earnest and warm sympathy and personal effort will put the College on solid grounds; but you must take hold of the matter now.

Professor Whiting, while expressing the hope that the interest of rich philanthropists might be enlisted to some extent in the endowment, truly asserted that, "after all, the bulk of the help must come from alumni and former patrons; that is, who know from actual personal knowledge and experience what the college stands for and what is its claim upon our people."

It would be a disaster should the friends of Hampden-Sidney fail to sustain it. Its record of service is too fine to be broken, either through lack of financial support from the men upon whom it has just claims for all time, or through being driven into the condition of dependency into which so many American colleges are sinking under the auspices of wholesale educational eleemosynarism.

Hampden-Sidney has been and is today one of the strongest types in this country of the small college, the most valuable and influential element in American education. Men who have been unfortunate in knowing little or nothing about it have opportunity to learn in the latest bulletin of Hampden-Sidney College, containing the general catalogue of officers and students of the institution from 1776 to 1906. This catalogue embraces the names of 3595 students, which the compiler, Dr. J. H. C. Bagby, believes is about 1500 below the proper figure. Of the number listed, the effort has been made to give the name in full; academic degrees received; profession; positions of trust or honor, civil, military, educational or other; present occupation and residence, and, in case of death, the date and place. A summary of the record of the alumni as a body is proof of the value not only to Virginia, but to other States, of the work done by Hampden-Sidney.

Of the 3595 students listed, of whom 940 advanced to the baccalaureate degree, 1 became President of the United States; 2, members of National Cabinets; 4, ministers to foreign countries; 10, members of the United States Senate; 22, members of the National House of Representatives; 8, Governors of States—Virginia 3, Maryland 1, Kentucky 1, Missouri 1, Illinois 1 and Indian Territory 1; 10, other State officers in Virginia; 2, Presidents of the Supreme Court of Appeals of Virginia; 5, other members of the same court; 59, judges of circuit and county courts of Virginia; 23, members of constitutional conventions; 24, members of the Virginia Senate; 70, members of the Vir-

ginian House of Delegates; 1, major-general; 1, brigadier-general, United States Army; 1, surgeon-general in the United States Navy; 1, major-general; 2, brigadier-generals; 19, colonels; 20, majors; 73, captains; 62, lieutenants; 47, surgeons, 23, chaplains, and 390, non-commissioned officers and privates, Confederate States Army; 2, founders of colleges and universities; 6, presidents of universities; 20, presidents of colleges; 98, professors of colleges and universities; 74, principals of academies and high schools; 219, teachers; 3, Bishops of the Protestant Episcopal Church; 470, other clergymen—429 Presbyterian, 27 Episcopalian, 7 Baptists, 6 Methodist and 1 Lutheran; 361, physicians, and 440, lawyers.

It would be difficult if, indeed, possible, to match the conspicuous record of ability and public service thus indicated for sons of Hampden-Sidney by that of any other college of like size and length of life. The men that it raised were real men. They were really educated, trained in heart as well as mind, and fitted to do their part in whatever career they followed. History would

sustenance. Of them 1467 are known to be living. They are scattered in Alabama, Arizona, Arkansas, California, Colorado, Delaware, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Virginia, Washington, West Virginia, Wisconsin, Brazil, China, France, Italy, Japan, Korea, Mexico and the Philippines.

These alumni must rally to the opportunity before them in the endowment of Hampden-Sidney. Few of them are men of great wealth. Most of them probably would be unable to give large sums at once. But it might be possible for 1000 of them to pledge an average of \$50 a year for 10 years toward the endowment, thus providing \$50,000 before the opening of the next session and \$500,000 within the next 10 years. If self-denial and self-respect of the alumni of Hampden-Sidney could yield

A Teacher and a Preacher

Are you interested in the progress and prosperity of the South?
Do you want to understand what its resources are and what its future will be?

Are you thinking of the South's industrial potentialities, of its coal, of its oil, its gas, its iron, its water-powers, its reclaimable lands, its railroads, its agricultural resources, its opportunities for development work?

Every thinking man, whether his home be in the South or whether he is living elsewhere, necessarily wants to know about the South and to know about its resources and its future.

The broad business man, whatever may be his business or profession, recognizes that his education is incomplete unless he knows about his own country. "Know thy country" as well as "know thyself" is part of the life of those who do things and whose work counts in the world's advancement.

Are you, reader, following this plan? Are you learning from the highest authoritative sources about the South, what it is and what its future will be? Unless you are doing so you cannot rightly understand the forces which are destined to have a great effect not only upon this country, but upon the world.

The January 7th issue of the Manufacturers' Record will be the broadest and most comprehensive publication ever issued about the South and in the interest of the South's development.

The ablest experts in the country will write of the South's resources and its advantages.

No man who wants to know about the South, whether he is living in that section or elsewhere, can afford to miss it.

No man who wants his business friends or acquaintances to know about the South and its future and its possibilities of development can afford to let them, if they are not now thoroughly posted about the South, remain longer in ignorance.

Every copy of that issue of the Manufacturers' Record will be a teacher, showing to the people of the South their own opportunities, and a preacher to those of other sections, a missionary to the heathen, as it were, telling them of the advantages of this favored land.

lack much were it not for the record of the work of Hampden-Sidney men, not merely in the lofty positions upon which the public eye is usually directed in estimating deeds, but in the more quiet, but none the less influential, places occupied by teachers of men, whether ministers of the Gospel, college professors, physicians or lawyers.

This influence must not be permitted to diminish. In this day of materialism, size and numbers in a college count for too much. Size and numbers tend to suffocate fundamental principles in education. The small college is the best college today, as it was in the past. Real men must do everything possible to save the small college from disappearing, and at the same time from losing character in becoming a verniform appendix of an Educational Trust, no matter how tempting the bait of pensions for professors or of dribbles from massed millions speciously undertaking to dominate the educational system of the country.

Hampden-Sidney is decent and self-respecting in looking to her alumni for

such a promise, as it certainly can, genuine philanthropists would be likely to recognize the situation substantially, and in such recognition emphasize through Hampden-Sidney the value of the small but live college. The light set upon a hill by the founders of Hampden-Sidney and kept burning clearly in adverse circumstances must not be allowed to become dim at this late day.

PROTECTION AND THE SOUTH.

The *News and Observer* of Raleigh, N. C., evidently misunderstands the position of the MANUFACTURERS' RECORD as to protective tariff when it says:

The MANUFACTURERS' RECORD has repeatedly said the South has prospered without protection more than any other section of the country. The MANUFACTURERS' RECORD is the supreme authority in its industrial field.

We can recall nothing which we have written since the MANUFACTURERS' RECORD first began publishing, nearly 27 years ago, which would justify the assertion that we had repeatedly said "the South has prospered without pro-

tection more than any other section of the country." On the contrary, we know that the South has prospered under a protective tariff now in operation. That is a fact which no one could dispute. Furthermore, we have contended vigorously for a protective tariff; we did our utmost to prevent the injury to the South that would have resulted from the Wilson tariff bill if it had become law in its original form, and we propose, because of our deep interest in the welfare of the South, to combat at every point the latest phase of proposed tariff revision known popularly as "free raw materials."

For more than 25 years the MANUFACTURERS' RECORD has stood for the fullest development of the material resources of the South. It has on purely economic grounds and without regard to party politics, labored to impress upon the South the value of protection to the mineral, agricultural and industrial interests of this section whenever assailed by the demands of the East, whether under Democratic or Republican regimes, clamoring for free raw materials produced by the South in order to increase the profits of other sections at the expense of the South. That we have in this persistently antagonized the views of many of our Eastern and Northern friends and of very many of our Eastern advertisers, who want free ore and free coal and free lumber and free pig-iron, has never counted a farthing's weight with us. When the Republicans have sought in the interest of Eastern manufacturers to put on the free list those things which the South produces, on the ground that they are raw materials, the MANUFACTURERS' RECORD has opposed their position with all the vigor in its power. When the Democrats undertook in the Wilson bill to put on the free list coal and iron ore, sugar, rice, lumber or other things which the South produces, and to leave upon the machinery and other products which the South buys a duty of 40 per cent, or more, thus giving to the East a bonus of 40 per cent. against the South, we antagonized this with all of our ability.

The MANUFACTURERS' RECORD is a believer in protection, but primarily, and above all else, a believer in the need of protection for the South, that its industrial interests may be developed in the same way that protection has aided the vast development, with the almost limitless wealth, which has thus been created in the East and the West. But whether a man believes in protection or not, *per se*, the MANUFACTURERS' RECORD has never been able to understand the willingness of the South to sacrifice itself by yielding to the demand of the East for free trade on the things which the South produces, when protection is to be continued on the things which the South buys. This may be a selfish point of view, but the South is justified in selfishly fighting for protection to its industries—for protection to every industry which needs protection—so long as a protective tariff is the policy of the country. In the discussion now under way in regard to the revision of the tariff it may be accepted without question that many of the larger Eastern manufacturers will seek to have put on the free list the things which they buy as raw materials, but which are to the South just as essentially finished products as is the textile machinery with which it equips its mills. There may be some readjustment of duties, but with the enormous expenditures of the Government there is no possibility of any great lowering of the duties now

in existence. Unless the South be on its guard, however, there may here and there be a reduction on Southern products, or possibly some may be put on the free list, to the injury of this section and for the benefit of other sections.

LOW-GRADE RAILROADS.

The MANUFACTURERS' RECORD commented last week on the construction of the Carolina, Clinchfield & Ohio Railroad, which is being built at a cost of about \$125,000 per mile, and which even in the heavy mountain section of the Carolinas, where some engineers in times past have thought it almost impossible to build a road, the maximum grade will be one-half of 1 per cent. The same article referred to the somewhat similarly expensive construction of the Virginian Railway, a line from the coal fields of West Virginia to Norfolk. The construction of these roads, with their splendid roadbed, heavy rails and low grades, will, we believe, practically necessitate the reconstruction or rebuilding of many Southern railroads. The value of this high standard of construction, with exceedingly low grades, is emphasized in an interview with Mr. C. M. Hays, president of the Grand Trunk Pacific, which is now building a line to cross Canada to the Pacific Coast, published in the *National Review*. Discussing the generous, or, as some have supposed, the even lavish expenditures on his road and roadbed, Mr. Hays said:

Well, our expenditures have not been excessive nor beyond the measure of our obligations to the Government and the community. What we require today and what the traveling public means to have is a first-class roadbed, with such low gradients and wide curvatures that our trains will run at very high speeds with perfect safety. Our grades are so remarkable that a single engine will haul the heaviest train from the head of the Great Lakes over the Rocky Mountains to the Pacific. Comparisons are, I know, odious; but they are sometimes, as in this case, highly educational. We carry our road from Winnipeg over the Rockies to Prince Rupert with a maximum gradient of 21 feet to the mile going west and 26 to the mile going east. Such gradients would be to the credit of roads such as the Pennsylvania or the English Midland. The grades are prairie grades only, and the immense economy in hauling freights with gradients so remarkable every railway man must recognize. We shall be able to put 2000 tons of freight into Prince Rupert from Winnipeg behind a single engine. Just realize what that statement involves for our settlers.

Of the seven great railroad systems which today cross the Rockies and reach the Pacific, the Union Pacific, with grades of 116 feet eastbound and 105 westbound, comes nearest to us. It would be difficult to overestimate the millions of yearly savings because of our advantage in grade. I will tabulate for you the grades of our six competitors and the dynamics of an engine on each:

Railroad.	Maximum grade.	Tractive resistance in lbs. per ton.	Gross capacity in tons of engine.
Grand Trunk Pac.	26	14	2041
Great Northern	116	50	572
Northern Pacific	116	50	572
Union Pacific	116	50	572
Santa Fe	185	76	376
Canadian Pacific	237	96	298

In other words, the same engine could haul up the maximum grade of the Grand Trunk Pacific nearly four times more freight in a train than either the Great Northern, Northern Pacific or Union Pacific, over five times more than on the Santa Fe, and about seven times more than can be hauled up grade on the Canadian Pacific. These are very remarkable figures, I am aware, and I accept the responsibility for putting them on record. You can read in these figures the reason for what you describe as our "generous expenditures." The interest on the cost of such a line will be returned to us ten times over in the economy of our operations and in the increased safety of our passengers.

Commenting on this statement of the case, the correspondent who interviewed Mr. Hays is reported as saying to him:

I see the point. Running at high speed down steep grades kills passengers, while the cost of employing seven engines to a train on up grades kills dividends.

The points made by Mr. Hays and by the correspondent are correct. We have come to a time in railroad work when steep grades and inferior construction have got to be abandoned. The railroad people of the South, and, for that matter, of much of the country, might just as well face the situation at once and recognize that modern engineering and modern railroad management will compel a rebuilding or reconstruction along more scientific lines of a very large part of the railroad systems of the whole South. It will be a costly job. It is quite possible that a billion dollars would be required to put the railroads of the South in thoroughly modern up-to-date condition. They may for some years pull along, hampered by high grades and sharp curves and bad roadbeds, but sooner or later the inevitable must be faced. Many of them must be double-tracked, much of the present roadbed must be abandoned, curves and grades eliminated, not only for the safety of the passengers, but for the more economic operation of the roads. Where and how to get the money to carry out such vast schemes of improvement is a great problem, but it must be done, or else railroad wrecks will destroy many lives, railroad congestion will retard business progress and make impossible earnings even on present capitalization. The problem is one which demands the best thought and the heartiest co-operation of the railroads and the people, for the prosperity and the actual life of both are at stake, ignore it as many may for the time do.

YOAKUM ON DEVELOPMENT.

An address recently made by Mr. B. F. Yoakum, chairman of the Rock Island-Frisco Line, before the Chicago Association of Commerce upon the subject "Our Country and Our Railroads" was a peculiarly happy utterance, because it presented briefly, comprehensively and clearly the principal facts about the relations of the railways and the people. It has been partly printed by the daily press, though doubtless few readers gave it more than passing consideration. He first touched upon the value of railroads to the country and the public. Considering the building of lines through undeveloped agricultural country, he said:

The immediate increase in property values is from ten to fifteen times the cost of the railroad. The production of the farms made possible by the railroad brings to the farmers each year several times the cost of the railroad. . . . To successfully carry through important construction work plans must be made years ahead; therefore, it is of paramount importance for the people and the railroads to have a fixed governmental policy that can be relied upon. . . . The development of this country since its independence has been carried on more rapidly and with greater wisdom than any other country of the world; but to further develop its resources, expand its trade and do what is necessary to bring it up to the standard which it merits calls for greater work in the future than has been accomplished in the past. The first essential factor in building a new country is the locomotive; the second is the plow; and when political agitation, unnecessary and restrictive regulations act as a bumping post to stop the headway of the locomotive, they stop the future progress and prosperity of the nation. If that vast domain west and southwest of Chicago, which is rapidly turning its grazing lands of the past into farming lands of the future, is to have the same mileage of railroad to an equal area as the country east of you, the present mileage will have to be increased 100,000 miles of new railroad. It was from that section of the country the packing-houses received their grass-fattened cattle prior to the advent of the railroad, while

now many of the large pastures are owned by prosperous farmers who have so increased their productiveness since the pasture days when ten acres were required to take care of one animal that the same ten acres now produce 450 bushels of corn, 300 bushels of wheat or 8 bales of cotton. This illustrates the change that is taking place and furnishes indisputable evidence that the country's transportation, unless pushed forward, will soon become inadequate, and the loss must fall upon the farmer, the merchant and the manufacturer alike.

But that Mr. Yoakum did not consider his subject solely from the railroad point of view is shown by the following excerpts:

All work necessary for the proper upbuilding of a country like ours cannot be accomplished alone through the railroads. Our waterways must have the attention of the Federal Government under as broad and comprehensive a plan as the policy pursued by our bankers in finding capital to build up our splendid railroad system. . . . If the 30,000 miles of railroad of this country at the close of the war between the States had been under Government ownership and control, the same as navigation or waterways, where would we have been today in the nation's growth if they had done no better for the public in furnishing rail transportation than they have in furnishing water transportation? . . . All railroads engaged in the movement of commerce between States should be under the control of the Federal Government rather than under 46 State regulations. Railroad pools should not be legalized; pools are secret understandings between the parties to them; but railroads should be permitted to enter into open traffic alliances subject to the approval of the Interstate Commerce Commission, which would safeguard the interests of the public. The same Federal authority should authorize the issuance of railroad securities, thereby protecting the investor against overcapitalization.

There are several points in the address by Mr. Yoakum worthy of careful attention and consideration, although all of it is interesting and important. The points referred to are the great value of railroads as factors in raising the money worth of lands, the need for more railroads, the correlative need for development of our inland waterways, and the necessity for a fixed governmental policy concerning railroads, together with Federal control of all interstate commerce, in order to attain the best results in the form of service to the public. He is a man especially well qualified to speak upon them, because he is a practical railroader, one who practiced railroading first and theorized about it afterward, instead of doing the reverse, as some advisers upon transportation problems have done. He has grown with the business, and, having built thousands of miles of line in the Southwest, there is probably none who knows better than he what a railroad can do for new territory. His style of speaking is terse and plain, and while he may be a little too sanguine in his expressions and hopes concerning the future influence of the Interstate Commerce Commission, the general tone of the speech is ringing with common sense and sound judgments. If there should happen what he says ought to come about with respect to the Government, the people and the railroads, there could be no doubt that many of our transportation problems would be eliminated, to the gratification of all concerned.

WORK FOR THE SOUTH.

Secretary T. K. Parrish of the Richmond Cedar Works, Richmond, Va., writes to the MANUFACTURERS' RECORD:

I wish to state that your paper has done big things to upbuild the South.

In acknowledging a reference to the opportunities of Yorkville, S. C., Mayor John R. Hart of that town writes to the MANUFACTURERS' RECORD:

I take this occasion to congratulate you on the work you are doing for the South.

AMERICAN REPUBLICS.

Under the management of Director John Barrett of the International Bureau of American Republics every legitimate effort is being exerted to improve the monthly bulletin of the bureau into a world-recognized, interesting, instructive and useful official publication. The November issue, for instance, contains such interesting articles as "Municipal Organizations in the Capitals of Latin America," "William Wheelwright, a North American Captain of Industry," "Gold Mining in Columbia and Peru," "Coffee," "Progress of Construction on the Pan-American Building," "A Rapid Glance Over Brazil," "The Fishing Industry of the Galapagos Islands," "National Flags and Coats of Arms of the American Republics," "National Holidays of the American Republics" and "Railroad Gauges," besides editorial comment, book reviews and the "Latin American Notes," specially suited for paragraph reproduction in newspapers.

The annual report of Director Barrett is one of the most comprehensive expositions that has ever been made of the vast opportunities for wealth creation in the Latin Americas, the possibilities of commerce with them and of the effective work which the bureau is doing in a field which it describes as offering today "greater opportunities and inducements for the legitimate extension of the trade and influence of the United States than any other section of the world."

The Jacksonville Board of Trade, Mr. W. A. Bours, president, and Mr. H. H. Richardson, secretary and treasurer, is circulating folder displaying graphically the advantages in commerce of the St. Johns River, Florida, and giving succinctly a mass of valuable facts about the trade and manufacturing opportunities of Jacksonville.

The report of the Virginia Eastern Shore Produce Exchange shows that during the past year 500,000 barrels of sweet potatoes, 493,000 barrels of Irish potatoes, 100 refrigerator carloads of strawberries and 220,000 packages of peas, onions and cabbages were handled, and that the gross receipts were \$2,496,635.

The Girl and the Motor. By Hilda Ward. Publisher, The Gas Engine Publishing Co., Cincinnati. Price \$1.

This volume, which is illustrated, contains the experiences of the author, a woman, with a small motor boat and a 20-horse-power automobile and the adaptation of her inventive instincts to situations that arise from time to time. The interesting narrative suggests to the novice, and even the expert in gas engines, lessons as to their care, the avoidance of troubles and their remedies.

Patents as a Factor in Manufacturing. By Edwin J. Prindle. Publisher, the Engineering Magazine, New York.

This volume, which is of the Works Management Library, is designed not to make an inventor or the manufacturer his own patent lawyer, but to convey an idea of the nature of a patent, the protection it may afford, the advantages it may possess for meeting certain commercial conditions, the safety which may be secured in relations between employers and employees and the general rules by which the courts will proceed in upholding a patent and in thwarting attempted infringements. Its purpose is especially to lay down the fundamental principles so that they may be grasped clearly and fully enough to direct rightly the course of the inventor, patentee or manufacturer in the early steps which are usually taken before the advice of counsel is secured.

\$500,000,000 Bonds for Waterways Improvements

[Special Correspondence Manufacturers' Record.]

Washington, D. C., December 12.

"The National Rivers and Harbors Congress approves the plan urged by the President of the United States for the creation of a commission or department of the National Government that shall adopt a general scheme for the conservation of all the natural resources of the country. But this congress realizes that of necessity it will be some time before such plan can be legislatively adopted and the commission or department formulate its detailed policy, and believing that the need of river and harbor improvement that we may have adequate water transportation is imperative; and realizing that there are now a number of river and harbor projects sufficiently matured and the need for which is so pressing as to warrant the Congress of the United States in immediately bringing about their adoption and completion, it is the sense of the National Rivers and Harbors Congress that:

"First. The Congress of the United States should at its present session authorize the issuance of bonds of the Government to an amount of \$500,000,000, to be sold from time to time in such quantities as may be necessary, the proceeds of same to be used in the payment exclusively of such river and harbor work as shall be authorized by Congress; the provisions for the issuance of said bonds to be similar to those authorizing the bonds for the construction of the Panama Canal.

"Second. We further urge that the Congress at this session authorize the completion of such river and harbor projects heretofore entered upon as are of such a character as to surely fit into and carry into effective use any larger, comprehensive and connected waterway system that may be subsequently adopted.

"Third. That Congress also adopt such new projects as are of a like character as those just mentioned.

"Fourth. We further recommend the appointment by the president of this organization of a committee of five, of which he shall be a member, to prepare a bill for introduction in the Congress of the United States providing for the bond issue above set forth and the creation of a statutory commission to study the waterways of this and foreign countries and suggest to Congress in a full and detailed report a comprehensive plan and policy for improving our waterways.

"Fifth. We further urge that the Corps of Engineers, United States Army, should be at least double its present size, utilizing in the permanent organization as far as practicable the present United States Assistant Civil Engineers, and that the Corps of Engineers be given authority to formulate and propose to the Congress plans and projects for river and harbor improvement."

These resolutions, adopted by the National Rivers and Harbors Congress in convention here this week, emphasize the determined effort which is to be made by the organization to secure the approval by Congress of a \$500,000,000 bond issue to provide funds for carrying a broad and comprehensive development of the waterways of the country.

This action came as a climax to the greatest demonstration ever made by the people of the United States for the conservation and improvement of one of the country's most important natural resources, and one which undoubtedly will bring in the end the greatest good to the greatest number.

The National Rivers and Harbors Congress was organized in 1901 by a number of far-seeing men who realized the vital

necessity of improved waterways to the country's economic commercial development in the fullest measure, and that to attain this, public sentiment must be aroused and crystallized in its favor. A few years later the association was reorganized, and under the leadership of Congressman Joseph E. Ransdell of Louisiana as president, ably assisted by Capt. J. F. Ellison of Ohio as secretary and treasurer, and John A. Fox of Arkansas as special director, an educative campaign has been carried on that has brought the people of the country to a realization of the real value of and the necessity for waterway improvement. At each successive annual meeting for the past four years in Washington the increasing interest of the people of the country was indicated by the number and prominence of those attending as delegates of representative bodies. The meeting just closed strongly evidenced, by its attendance on the part of over 3000 delegates from 44 States and several Territories, including men in every line of endeavor, representing capital, labor, manufacturers, financial bodies, railroad and steamship interests, merchants, statesmen and the press, that public sentiment is now thoroughly aroused and crystallized, and the time has come for action. Nothing indicates more how fully this sentiment has been aroused than the fact that both of the leading political parties pledged their support in their national platforms, thus committing those elected, whether Democrat or Republican, to the movement, and the further fact that both President Roosevelt and President-elect Taft have publicly stated that they are strongly in favor of waterway improvement, and that if no other revenues are available they favor an issuance of bonds. With all of these interests committed to the undertaking, there is every reason for definite and favorable action to be expected at an early date.

From now on every effort will be expended by the National Rivers and Harbors Congress to secure results. A committee is to be appointed by President Ransdell to prepare the bond issue bill for introduction in the National Congress, likewise a bill creating a statutory commission to study the waterways of the United States and foreign countries and suggest to the National Congress in a full and detailed report of a comprehensive plan and policy for the improvement of waterways.

To further this work for results, headquarters of the National Rivers and Harbors Congress are to be established in Washington, with John A. Fox in charge, and from this office will be directed the campaign to secure early and favorable action on the bills to be introduced.

The following general officers were elected for the coming year: President, Congressman Joseph E. Ransdell, Lake Providence, La., and secretary and treasurer, J. F. Ellison, Cincinnati. The directors chosen by districts are:

Atlantic Seaboard—Wm. H. Lincoln, Boston, Mass.; Olin J. Stephens, New York; Frank D. LaLanne, Philadelphia; J. Hampton Moore, Philadelphia; Rufus K. Wood, Baltimore, Md., and Herbert C. Warren, New Haven Conn.

South Atlantic Seaboard—E. J. Hale, Fayetteville, N. C.; William B. Stillwell, Savannah, Ga.; L. B. Dozier, Columbia, S. C.; Charles J. Swift, Columbus, Ga.; John C. Freeman, Richmond, Va., and D. N. Fletcher, Jacksonville, Fla.

Gulf Seaboard—M. J. Sanders, New Orleans, La.; Lee Estes, Texarkana, Texas; Albert Bush, Mobile, Ala., and S. Taliaferro, Houston, Texas.

Entire Mississippi Valley District—Thos. Wilkinson, Burlington, Iowa; W. P. Kennett, St. Louis, Mo.; Governor J. A. Johnson, St. Paul, Minn.; W. K. Kavanaugh, St. Louis, Mo., and Chas. Scott, Rosedale, Miss.

Great Lakes District—Edward H. Butler, Buffalo, N. Y.; James H. Davidson, Oshkosh, Wis.; E. W. Wickey, East Chicago, Ind.; Robert A. Downey, Oswego, N. Y.; Edw. T. Wilder, Chicago, Ill.; Geo. H. Eichelberger, Cleveland, Ohio, and Alexander McDougall, Duluth, Minn.

Ohio Valley District—W. B. Rodgers, Pittsburg, Pa.; Albert Bettinger, Cincinnati, Ohio; John L. Vance, Columbus, Ohio, and Henry Riesenberg, Indianapolis, Ind.

Tennessee and Cumberland District—M. T. Bryan, Nashville, Tenn., and J. A. Patten, Chattanooga, Tenn.

Arkansas Valley District—John A. Fox, Blytheville, Ark.

Missouri Valley District—Lawrence M. Jones, Kansas City, Mo., and Capt. I. P. Baker, Bismarck, N. D.

Pacific Coast District—A. H. Devers, Portland, Ore.; George C. Pardee, Oakland, Cal., and Dr. N. G. Blalock, Walla Walla, Wash.

The vice-presidents chosen by States are:

Alabama, Frank P. Glass, Montgomery; Arkansas, I. M. Worthington, Lake Village; California, C. E. Grunsky, San Francisco; Connecticut, Edw. H. Warner, New Haven; Colorado, Brooks Irione, Colorado Springs; Delaware, Horace Wilson, Wilmington; District of Columbia,

M. I. Weller, Washington; Florida, S. M. Sparkman, Tampa; Georgia, Oswell R. Eye, Augusta; Idaho, W. B. Heyburn, Wallace; Illinois, Geo. Parsons, Cairo; Indiana, J. H. Odell, Evansville; Iowa, C. T. Hancock, Dubuque; Kansas, W. R. Childs, Kentucky, Jas. Rogers, Paducah; Louisiana, J. T. McClellan, Maine, Edw. C. Plummer, Bath; Maryland, David H. Carroll, Baltimore; Massachusetts, Lloyd E. Chamberlain, Brockton; Michigan, E. A. Stowe, Grand Rapids; Minnesota, J. G. Haynes, Minneapolis; Mississippi, B. G. Humphrey, Greenville; Missouri, E. O. Ellis, Kansas City; Montana, Judge F. E. Stranlian, Fort Benton; Nebraska, Henry T. Clarke, Omaha; Nevada, Francis G. Newlands, New Hampshire, O. L. Frisbee, Portsmouth; New Jersey, Geo. W. Tomkins, Newark; New York, Wm. B. Jones, Albany; North Carolina, Jas. H. Chadbourne, Wilmington; New Mexico, L. Bradford Prince, Santa Fe; Ohio, Edwin C. Gibbs, Cincinnati; Oklahoma, J. W. Zeveley, Muskogee; Oregon, Jos. W. Bennett, Marshfield; Pennsylvania, Geo. E. Bartol, Philadelphia; South Carolina, Governor M. F. Ansel, Columbia; Tennessee, E. R. Richardson, Nashville; Texas, Walter Gresham, Galveston; Virginia, R. A. Dobie, Norfolk; Washington, W. O. Fowler, Seattle; West Virginia, B. B. Dovenor, Wheeling; Wisconsin, Geo. H. D. Johnson, Milwaukee; Hawaii, J. K. Kalanianole, Honolulu; Rhode Island, Wm. C. Green, Peace Dale, and United Commercial Travelers' Association, W. A. Johnson of Covington, Ky.

WM. H. STONE.

RICE IN TEXAS' DEVELOPMENT.

[Special Correspondence Manufacturers' Record.]

Houston, Texas, December 10.

Our daily papers today are announcing the fact that there is some demand for rice, and that top grades are commanding better prices, namely, that No. 1 Honduras is selling in New Orleans for \$4.30 per barrel of 162 pounds. Thirty days ago our papers were advising the rice farmers to sell their rice at the price then offered, which was \$3 per barrel. Had their advice been taken the loss to the farmers (which means a loss to the State) would have amounted to \$1,000,000.

It is the practice of our daily papers to call daily on the brokers who deal in rice and get their views of the price situation. They go so far as to publish long interviews from brokers that have just returned from the East, that know the situation beyond a question of a doubt, and who are always ready to give advice to the farmer, and to advise him against what they term holding for better prices; in fact, they know what it costs to produce rice and what the farmer should be content to accept for his article.

Fortunately, the rice planters are an intelligent class of business men, the same as you will find in the manufacturing of other commodities.

After the manufacturer of a plow, wagon, engine or any other useful article has turned out the finished product he knows what is a fair selling price for the same to permit him to continue in business, and he puts that price on it and does not sell it until he gets it. He is not accused of holding for better prices; this term holding is harsh, and I want to see it dropped. The farmer is a producer, the same as any other manufacturer, and his loss is the loss of all manufacturers, for if the farmer is not permitted to make a profit he will certainly quit, and we will all feel the loss of his production. As stated in my last article, the rice planters of Texas distribute annually \$8,000,000

between the other manufacturers of the United States. The other States swell this to \$20,000,000. If Providence should favor the rice planter for a few more years, and he gets a reasonable return on his investment, you may feel sure that he will only hasten to invest these returns in a comfortable home, good roads and improved machinery, and in this way increase the demand for manufactured articles of all kinds.

It will prove profitable to any community if its men will study carefully any new industry, and if it gives promise of success every encouragement should be given it, for it is the natural products of the soil that build our towns and cities. If our industries are crushed in their infancy by the desire of a few brokers to get rich quick, we will be called on to take from other sources sufficient funds to re-establish that which, if properly nourished in the beginning, would have continued to have contributed to the building up of the country.

Rice offers the quickest returns of any investment that can be made in the coast country. Every dollar put in this industry will be returned tenfold.

Whether you are a planter or not, you can afford to contribute a few dollars toward developing this business, the same as you would contribute to the securing of a new railroad, steamship line and manufacturing plant, for like these, rice will increase the business of every institution in the town or city.

Eight million dollars cannot be distributed annually without everyone feeling the effect. Young men in offices, professional men, should invest their surplus earnings, no matter how small, for it will increase business in all lines, and indirectly, as well as directly, we all get our proper share of the increased business that this investment naturally produces.

Let us be careful about what we publish

that will tend to reduce the returns on our products.

The consumer is always willing to pay liberally for what he needs, and has no desire to buy anything for less than the cost of production.

Let me say again that rice is the natural product of our coast country, and it will prove in the end to be to Texas what the coal fields are to Pennsylvania, the forests to Maine and Ohio, the gold mines to California and Colorado. We will do well to invest our surplus earnings in it, for the value of your home in the city, the resources of your business, will depend on the success of this product.

W. S. DELEBY, C.E.

FOR WILMINGTON'S WELFARE.

Mr. Charles N. Evans' Optimistic View of Conditions There.

[Special Cor. Manufacturers' Record.]
Wilmington, N. C., November 30.

One of the leading interests in and around Wilmington is that of lumber manufacturing, and during the recent financial depression it was the most affected, many of these plants being compelled to close down. Now, however, nearly all of them have resumed operations, so that they may be considered a good index of how conditions are improving in this section. While it is true that here and there evidences can be noted of the results of the panic, business generally may be said to be in about a normal state, and business men in all branches are talking with a confidence and faith in the future that indicates an early resumption of former activities. Wilmington always moves along in a conservative manner, and is not given to spasmodic booms. Its growth in all lines has been steadily forward, and it has won recognition by the real merits of its advantages. Wilmington has become one of the largest export cotton-shipping ports in the country, and contains the largest individual cotton-exporting firm—Alexander Sprunt & Son—this firm having shipped last year over 500,000 bales. Other products, too, are shipped abroad from this port, and the Government has so recognized its importance as to give the Cape Fear River, leading up to the city, a mean low-water depth of 24 feet, and is arranging to increase this to 30 feet. Additional Governmental recognition is shown in an appropriation of \$300,000 for the construction of a United States Custom-house.

By reason of its fine soil and climate, the latter being due to the Gulf Stream, the country surrounding Wilmington has become a most important truck-growing section, and this industry, which is always steadily on the increase, is having a marked and stimulating effect on local business, in addition enhancing the advantages of this city and section.

The Seaboard Air Line has recently purchased a large river frontage here for the construction of coal docks, this being done to utilize the advantages of that road's connection at Bostic, N. C., with the Carolina, Clinchfield & Ohio Railway, which has direct connection with the Clinchfield Coal Corporation's mines in Southwest Virginia.

Wilmington has also recently voted \$800,000 bonds for general municipal improvements, so that taken altogether there is every reason for its people to be optimistic as to its future.

Your correspondent talked with those engaged in many and varied business undertakings. Some were more optimistic than others, but an average conclusion as to general conditions may be said to be contained in the words of Mr. Charles N. Evans, cashier of the Southern National Bank, who said:

"Business conditions in Wilmington are

satisfactory. Naturally there are yet traces of the general havoc wrought by the recent panic and consequent shutting down of manufacturing and industrial interests over the country, but it may truly be stated that the general aspect of business conditions in this city and section is about normal. When the panic struck the country Wilmington was almost on an industrial boom, and perhaps one of the advantages of a bad situation was found in the fact that, as a result, this boom was not given full fruition, for the conservative temperament of the controlling interests of the city have always stood against undue inflation.

"Perhaps no better endorsement could be given to the conservative character of the business interests here than to recite, briefly, the showing made by the Wilmington banks during the recent financial panic. Although unable to realize in currency upon balances maintained in the depository centers, and faced with a realization that prominent nearby cities were both issuing script currency, clearing-house certificates and the like, the banks of this city had recourse to no such measures. The fact that they did not do so is more commendatory when consideration is given that Wilmington has for many years been a recognized depository for numbers of smaller banks in the agricultural sections of both North and South Carolina. Such banks felt keenly the effects of unrest then pervading throughout the country, and unless kept in full supply with currency from the depository centers upon which they depend in such contingencies the situation would have been perilous. It was just here that the banks comprising the Wilmington Clearing House Association acquitted themselves with great credit, for with currency commanding high premiums in all Northern cities the banks of Wilmington made shipments all through the panic aggregating about \$300,000 currency and silver per month to interior correspondents, and entirely without premium charge. In addition to this, Northern exchange, then so scarce, was sold in a monthly aggregate of more than \$10,000,000, and at no greater premium than \$1.50 per \$1000. All this time the industrial and manufacturing interests were proceeding without inconvenience as to pay-rolls. In the month of November, when the general conditions were at their worst, the city banks furnished alone \$746,000 in cash pay-rolls to the railroads and local manufacturing interests. This does not, of course, include the usual routine payments made daily at the bank counters. A general synopsis of the banking aspect is shown as follows—eight commercial, savings and private banks and banking firms: Aggregate capital, \$1,175,000; aggregate surplus and undivided profits, \$628,000; aggregate deposits, \$7,675,000; aggregate loans, \$6,000,000.

"Wilmington has 17 wholesale houses, many of them established years ago, and all doing good business. Collections are reported somewhat slow just now, but this is accounted for in the reluctance with which the farmer is parting with his cotton at the present low prices. Faithful, and in accord with the policy of her banks, as indicated above, the wholesale people of our city, always a source of supply to the interior merchants, are carrying the burden and making the load lighter on the smaller merchants by carrying over a certain amount of liability which is usually liquidated at this season.

"One of the live auxiliaries of the immense wholesale interests of this city is the Wilmington Chamber of Commerce. There are 110 members of the chamber, which is located in elegant quarters on Front street. Every facility is afforded in the way of special telegraph wires, includ-

ing a special wire right into the chamber, which is operated by a man employed by the organization. A daily market sheet is also printed under supervision of a paid secretary, who is constantly on duty. The market reports are all shown and every arrangement is at hand to dispatch business. To the present efficient president of this organization, Mr. J. A. Taylor (himself a wholesale grocer) is largely due the splendid success of this important adjunct to our commercial prosperity. Just at present a movement is on foot to establish within the chamber a clearing-house credit bureau, and this will doubtless be fully consummated within a short time.

"Owing to the fact that some of the larger manufacturing interests operating in Wilmington are controlled by Northern wholesalers and brokers, themselves connected with and also controlling a chain of similar manufacturing mills throughout the South, there was a considerable setback to these mills during the panic, brought about through the stringency in Northern markets, which made it necessary to largely curtail the product of each of these mills. In some cases there was a temporary shut down, a natural result of conditions under which nicely-dressed lumber, boards and planks were actually sold as firewood in New York city during the panic in order to create a market. In panic times not only individuals, but large corporations as well, pigeon-hole all propositions for buildings and betterments, and so it was that our large mills, employing hundreds of hands and shipping hundreds of carloads and cargoes of lumber to the North and Northeast, had to either lie by or tie up large sums by stacking lumber in their yards. This was the worst feature of the panic to Wilmington, and it is indeed most gratifying that this situation is also slowly righting itself, and once more our mills are at work. Contracts which were filled 30 days ago for native North Carolina pine lumber are now commanding from \$1 to \$2 per 1000 feet more, while the more select grades of lumber are meeting a very firm market, and at substantial prices. The whole situation seems to be much improved in the lumber line. While only recently there was only a sluggish market, and at prices hardly sufficing to do more than cover the cost of production, there is now a strongly awakened demand, and prices, in consequence, are becoming more attractive; in fact, one of the best evidences of awakened interest in the lumber market is the acquiring recently of some timber properties in this section by some Northern dealers—a feature that has been until very recently entirely passive during and since the panic.

"Forty years of honored and successful business endeavor upon the part of Messrs. Alexander Sprunt & Son, cotton exporters of this city, has brought about a condition which is worthy of special mention in our cotton and export trade. Signalized by fair dealing, ample resources and sympathetic co-operation with the producers and small dealers through the Carolinas, this firm has gradually and thoroughly established and extended its sphere of action until at present it operates its own vessels to foreign ports under special charter, and has formed connections which have enabled Wilmington to become the third port of the United States in the export of cotton. As the great bulk of our exports relates to raw cotton, it is worthy of note to mention that for the season ended September 1, 1908, the aggregate of our exports amounted to about \$32,000,000. The Government in the last session of Congress made due recognition of the importance of this port by granting an appropriation of \$300,000 for the construction of a custom-house, the preliminaries of which are already under way.

In addition to this, backed by strong efforts upon the part of Custom Officer Keith of this city, and our Chamber of Commerce, initial appropriations have been granted toward the final completion of a 30-foot channel to the sea. Combine these important features with the fact that interests identified with the Seaboard Air Line Railway Co. have only recently acquired large river frontage and docking facilities, which will enable it to care for vast quantities of coal to come through from the coal fields to Wilmington, all looking to the completion of the Carolina, Clinchfield & Ohio Railway, connecting with the Seaboard line, and it would appear that the future importance of our port is to be greatly augmented.

"Few communities conducting the volume of trade and shipping equal with Wilmington can make a better showing as regarding business failures for the panic year ending October 1, 1908. Notwithstanding general demoralization of the lumber trade as just mentioned, and consequent diminishing of local trade, we have done wonderfully well. Eliminating the figures of a large lumber-manufacturing concern operating near the city, whose control was held and business affairs conducted in another city, with merely an office here, which concern went down during the panic, the failures in Wilmington for the 12 months indicated concerned liabilities of only \$62,000, with assets of the value of \$37,150.

"Farmers who 10 years ago raised only small lettuce beds in their gardens for family use are now marketing in the North crops of lettuce which bring them in \$10,000 in round figures. The history of the development of strawberries in this section is, as you know, now a matter of general comment. The outturn of this crop is measured by the hundred carloads, and the annual value of the strawberry crop to this section alone is now showing around \$1,500,000. Equally in proportion is the development of other trucking products; hence the recent establishment of nearby colonies, Italian, German and English, planted for the distinct purpose of bringing to completion a grand scheme to make this special region a garden spot for supplying Northern markets with early fruits and vegetables.

"Many other features of our business development could be brought out. The recent voting of \$800,000 bonds to pave and improve the city streets and to provide improved water and sewer facilities, etc., but these will show for themselves later on."

WM. H. STONE.

Plans Oklahoma and West Virginia Plants.

The Hines Manufacturing Co. of Portland, Ind., writes the MANUFACTURERS' RECORD that the company will establish branch factories in the vicinity of the Oklahoma and West Virginia oil fields, but the exact locations have not been determined. These plants will be equipped for the manufacture of sectional steel drilling derricks, windmill derricks, steel towers for water-works, drilling machines and appliances and supplies for gas, oil and water. The company will be in the market for power machinery, punches, shears, drills, etc. Associations interested in locating manufacturing plants in their sections will find it advisable to correspond with the Hines Manufacturing Co., of which Omer S. Whiteman is secretary.

The Public Service Association of Virginia has been organized with Messrs. E. C. Hathaway of Norfolk, president; H. W. Anderson of Richmond, R. D. Apperson of Lynchburg and A. F. Rison of Danville, vice-presidents, and H. M. Darnall of Roanoke, secretary and treasurer.

DUST IN COAL MINE DISASTERS.*

By WM. N. PAGE, President West Virginia Mining Association.

In olden times, when we had to depend on gravity and slow currents for ventilation, no one ever heard of dust as an element in explosions, and even now I know of no disaster remotely attributable to dust where high-pressure fans were not employed. Until comparatively recently all explosions were attributed to fire-damp, and to guard against this danger we have created a new danger in the enormous volumes of air traveling at high velocities through restricted channels, which pick up every particle of dust within reach and keeps it in suspension. Just as the remedy for fire-damp has developed the more serious problem of dust, so will the remedy now universally proposed for dust result in a greater danger from water, because water will not only affect the health of the miner, but it is the indirect cause of every death from roof falls. According to the United States Geological Survey's reports, 66 per cent. of all underground fatalities is attributable to the fall of roof and coal, and only 34 per cent. to all other causes, and I presume it would be fair to assume that not more than 5 per cent. of deaths can be traced to dust explosions. It would seem, therefore, that the remedy of water proposed in the effort to save five lives is now the death portion of 66, and any increase of water in the mine must necessarily add to roof fatalities.

Slate or fire-clay probably constitute over 90 per cent. of the mine roofs in West Virginia, and every practical miner knows that these slates and clays disintegrate rapidly when exposed to atmospheric air and weather on the dumps or spoil banks, and when we force 200,000 or 300,000 cubic feet of air per minute through the mine at high velocities we are simply introducing outside conditions underground; consequently, the roof constantly disintegrates, crumbles and falls as it would do if the same material was exposed outside, and the more water introduced either by sprinkling or saturation of the air, the more deadly will be the consequences. We had a single-phase danger with fire-damp, a two-phase danger with dust, and we will have a three-phase danger with water, more deadly than the other phases combined.

In my humble opinion, the proper remedy for dust is not the application of water in any form, as it is not only of doubtful value in relation to the dust, but it is unquestionably far more dangerous to life and the mine than all other elements combined.

The only effective remedy is the slowing down of the ventilating currents to a velocity at which they will not carry dust in dangerous quantity, and this, I believe, can be done and still supply the mine with all the air necessary for the dilution of the gases, respiration and combustion. Any more than a sufficiency for these purposes must be a positive evil through both roof and dust. The tendency heretofore has been to regulate by statutes the specified volumes of air per minute for each man, animal and light, without any limit beyond the statutory specifications, and the mine inspectors have all considered high velocities as the most desirable attainment, the higher the better, with an eye single to fire-damp and pure air for the miners. It seems to me, however, that the time has come when the lawmakers and mine experts should study consequences, as too much of any good thing must always be harmful.

*From an open letter addressed through Neil Robinson, secretary West Virginia Mining Association, to mine owners and operators of West Virginia.

Instead of forcing 200,000 cubic feet of air per minute (or more) through restricted airways and passages by a single fan, under sufficient pressure to permeate every part of a tortuous mine, necessitating high velocities in many passages, I would suggest that the current be split as often as possible, and a number of auxiliary fans be substituted for one powerful single unit. Five fans delivering 40,000 feet will be preferable to one delivering 200,000 feet, not only because of the slower velocities, but from an actual saving of power through less friction. Such small units placed within the mine will operate as force and suction at the same time, and since electricity is now almost universally employed underground, there is no mechanical or other difficulty in the way of installation. The cost of the small units combined will be little (if any) greater than a single unit of equal capacity. Where there is more than one intake and outcast there is no problem involved, and in shaft mines with limited entrance the difficulties would be neither great nor costly, as the necessary intake and outcast where the velocities might be high could be easily isolated from all danger. In other words, the currents could be passed through auxiliary fans and slowed down, just as an electric force can be stepped up or down through a rotary converter. With such arrangement a uniform volume of air under slow velocity could be more satisfactorily distributed across all working faces, as a small motor-driven fan could be moved from place to place with little loss of time or money.

I make these suggestions simply to direct the attention of our mine managers to the subject, being fully convinced that water is not an effective remedy for the prevention or restriction of explosions attributable to dust; but granting, for the sake of argument, that it is a preventive, and that dust can be settled by a spray or humidity, its application is too expensive, uncertain and dangerous for practical purposes. Death from roof falls is like the falling of leaves one by one, making no disturbance, but an explosion, which kills in groups, though only one-thirteenth as deadly, is like a conflagration, which fires the imagination of the public.

In our efforts to protect life and property we must look to the falling leaves as well as to the burning bush, and the men who die one by one under roof falls are as much entitled to protection as are those who lose their lives in a spectacular disaster.

CONTRACTS AT CHATTANOOGA.

Building Continues in Spite of Wet Weather.

[Special Cor. Manufacturers' Record.]
Chattanooga, Tenn., December 12,

Heavy rains recently in Chattanooga and East Tennessee have had some tendency to discourage consideration of building prospects temporarily. The country needed rain, and it has served good purposes for our city in various ways, not to mention the good from the sanitary standpoint. A rise in the Tennessee River to 15 feet above low water has given impetus to the river traffic and allows the putting into commission of the larger steamboats. In a few years, when the Government completes the great work at Muscle Shoals and minor work at other points, it will not be necessary to stop the through river traffic at every low-water stage in order to wait for rains to float the boats over the present obstructions. It is said that a million feet of logs will be rafted down the river from the headwaters on this high

tide. Our lumber and furniture manufacturing interests are of great importance. Some of the sawmills on the river confine their operations to hardwood lumber.

Building continues in spite of winter and rainy weather. R. G. Pursley, now at 310 East Main street, has awarded a \$5000 contract to R. L. Westcott, a brick contractor, to do the brick work on his \$7000 livery stable on East Main street; James H. Horn is acting as foreman of construction on the stable for the owner.

J. T. Lupton, The Elizabeth, is receiving proposals for the reinforced concrete for three floors of his \$100,000 private residence at Riverview, the finest of the new suburbs on the Tennessee River, near the golf links of the Chattanooga Golf and Country Club.

The Stone Fort Land Co., J. T. Lupton, vice-president and secretary, is receiving proposals for the framing and rough lumber, steam-heating plant, one passenger and one freight elevator and plumbing for the \$40,000 five-story and basement brick mercantile building on Market street.

The Converse Bridge Co. has received contracts for the steel work on the residence of J. T. Lupton, the Stone Fort Land Co.'s building and the factory building of the Chattanooga Medicine Co.

Judge M. M. Allison, 609 Oak street, decided not to award a general contract for his \$12,000 residence at Riverview (suburb). He has proceeded with the construction under the superintendence of the architect. This will be a handsome building, with oak and mahogany interior finish, vacuum system of vapor heating, with electric and acetylene gas lighting.

Dixie Portland Cement Co., James Building, is having plans prepared for seven cottages to cost \$9000, to be erected near its works at Copenhagen, near South Pittsburg, Tenn. They will be of frame and stucco, with concrete foundations, metal lath, cabinet mantels, plumbing and electric lighting.

H. H. Embrey is having plans prepared for a \$2200 private residence on East 9th street.

A. P. Smith, 606 Market street, will soon have plans completed for two dwellings for rental purposes to cost \$5000.

D. Herndon Barr, 525 McCallie avenue, will erect when the plans are ready a \$4000 frame and stucco residence, with tile shingle roof, to be heated by hot water.

J. H. Atwater and R. W. Olmsted have awarded contract to J. H. Rawlings, a contractor, for \$15,000 to erect two apartment-houses on Poplar street, which will be equipped with hot-air heating furnaces.

T. B. COLBURN.

SUBSTANTIAL "GOOD-WILL."

Chickasha's Inducement for a \$1,000,000 Packing Plant.

[Special Cor. Manufacturers' Record.]
Chickasha, Okla., December 12.

The citizens are feeling much elated over receipt of news by telegraph from Chicago to the secretary of the Commercial Club that a member of the Schwartzchild & Sultzburger Packing Co. would visit Chickasha next week to look further into the proposition of location of a million-dollar packing plant in this section of the new Southwest. Two of the representatives of this great independent export packing company visited Chickasha and Fort Worth, Texas, two weeks since with view to reporting conditions, and this later news indicates that Chickasha may be the lucky point. The secretary of the Commercial Club has been gathering data on the live-stock conditions in Oklahoma and Texas for four months, and has been able in his work to give even the live-stock dealers of this section a surprise in wonderful increase in Oklahoma this year over last year in the growth of the hog

industry, the fact being attributed to both the rapid settlement of the new State and increase in growth of alfalfa.

Merely as an offer of good-will, Chickasha has tendered to the Schwartzchild & Sultzburger people \$100,000 and 100 acres of as beautifully and advantageously located land as ever lay out of doors, and those "next" feel that this will be chosen as the location for the great plant. Chickasha's advantage, in addition to its being a railroad center of the hog-growing and cattle-feeding portion of the new Southwest, is that of abundance of water and easy drainage. In the words of an expert packer, "Chickasha has all of the requirements for a great packing center except the established market, and that can be easily built up."

Chickasha is thriving and throbbing along all lines of city building save that of a fixed fact in the erection of a large hotel, the most needful structure that could be planned now. Two schemes are talked of, one that of a \$200,000 hotel and opera-house and the other a \$150,000 hotel, but as both are promotion propositions there is no certainty of either materializing in the near future. The conditions here are of the most encouraging nature for a good modern, up-to-date hotel. The traveling public cannot be accommodated, never a night passing that late arrivals in the city do not have to set up in the lobbies of the hotels and railroad depots because of inability to get beds. The transient conditions here right now are of such a nature and magnitude as would fill a 125 to 150-room up-to-date hotel.

The same condition is true, however, of the rent-house proposition. Near 250 new residences have been erected this year, and the good work of building goes on, yet the cry from the real-estate dealers and newcomers is "more rent houses."

The great electric water-power dam was to have been completed and running the wheels of industry before this, but the heavy rains of two weeks ago caused the Washita to rise and check the work of filling in the opening in the dam left as a safety vent until all other work was done. The work was caught with this opening about half filled, and so soon as the river gets down to its normal flow the fill can be completed; hence the citizens hope to see the wheels of industry, most all of which have contracted for power, soon running by electricity generated by power furnished through this harnessing of the Washita. The turning on of this power will be a great event in the new State, and as Chickasha is the gateway to the Washita Valley, and is the only railroad center on this, the only river capable of furnishing power in the State of Oklahoma, its citizens figure that this is to be the manufacturing city of the State.

The contractor and foreman for a \$580,000 job of street paving are on the grounds, and will commence work as soon as the material can be placed.

The street railroad company is preparing to push their work along with the street paving, the latter company to have 10 miles in operation in eight months.

The excavation is being dug for the walls of the new City Hall.

Bids are now being advertised for by the Board of Education for the furnishing of all materials and labor necessary to construction of an \$80,000 high-school building, the bids to be in by January 4, 1909.

The Government inspector who came to Oklahoma to look over Federal building sites returned to Washington and made much ado over the prices at which sites were offered. Congress authorized an outlay of \$15,000 for a site here, and it evidently did so with view to paying that amount for same; hence as no bid was put

in for larger amount there can be no good grounds for complaint here.

CAD ALLARD.

STEEL PLANT FOR NORFOLK.

By WALTER SHARP.

[Written for the Manufacturers' Record.]

Supplementing Professor Porter's confident prediction that lower Chesapeake Bay would be one of the three great iron and steel-making centers, that eminent authority on matters progressive, Mr. R. H. Edmonds, has recently shown how imperative are the needs of such a plant.

He and others claim that it will require from \$5,000,000,000 to \$15,000,000,000 to rehabilitate the railroads, the cost of iron and steel absorbing the largest percentage of that amount.

The recent discovery of a 600,000,000-ton deposit of iron ore in Cuba adds a most potential factor in bringing about so desirable a consummation. The advantages of the Norfolk section summarized are:

(1.) It is the point where high-grade native ores, coal, coke and limestone can be had cheaply. Coal, 2240-pound ton, Kanawha district, \$1.10 to \$1.20 f. o. b. mine. Freight rate to Norfolk, \$1.60 per ton. New River has a differential of 10 cents per ton. Coke, large contracts, Kanawha district, \$2.50 to \$2.75 f. o. b. ovens per ton of 2000 pounds. Freight to Norfolk, \$2. On the completion of the Virginian Railroad lower freight rates can be reasonably counted on.

(2.) The ease and low freight rates with which the finished product can be shipped to all parts of the world. Bargaining rates to New York can be obtained as low as 60 cents per ton.

(3.) Proximity to all the leading markets of this country.

(4.) Being but 75 miles from the Gulf Stream, an open harbor is assured every winter, and entire freedom from climatic excesses is its record for many years. Not since 1856-57 has ice prevented navigation.

(5.) Railroads terminating on Norfolk harbor aggregate 19,277 miles of trackage. A direct line to Seattle and Tacoma is semi-officially announced.

(6.) Coastwise regular steamship lines, having a bottom tonnage of 75,000 tons, make from one to seven trips each every week.

(7.) Any one of our six trunk lines can reach deep-water points on or near this harbor, where the heaviest laden ships can lie when the same has been developed properly.

(8.) The largest shipping can find safe and extensive anchorage in our waters.

(9.) The cities on our shores are among the most prosperous and progressive in the United States, enlisting the confidence and interest of the capitalistic world.

(10.) The rapid development and enhancement of Norfolk's tributary territory and the great prosperity of the South gives positive certainty to the building up of all Hampton Roads' borders with greatly enlarged population, and hence a supply of labor commensurate with demands. The prospect of Norfolk's soon being made a port of entry for foreign immigration emphasizes this claim.

(11.) Health is as certain as in any part of the world, and far more so than in most sections. The charm of life is best illustrated by the reluctance which all have to leaving Norfolk.

(12.) Freight rate on railroad iron to Atlanta from Norfolk, \$4.50 per ton; from Sparrows Point to Atlanta, \$5.55 per ton.

(13.) Depths of water, currents, tides and sheltered anchorages all present favorable conditions.

(14.) The fact that an available site, containing 300 acres of high land, fronting over a mile on the water, can be had for

less than \$100,000, is ample to convince prospective investors that no effort is made to discount the future.

(15.) The fact that the United States navy-yard in this harbor and the Newport News shipyard jointly employ several thousand skilled mechanics gives confidence that a large steel industry can secure abundant labor when needed. Outside mechanics are more easily induced to come where others of their craft have preceded them and report conditions as satisfactory.

(16.) Ninety-eight per cent. limestone, located on railroads leading directly to Norfolk, can be delivered here at a very low price.

Facts compiled by W. K. Boutwell, president of the Pilots' Association:

Norfolk: U. S. Lat. 36-51 N.; Long., 76-19 W. 24 miles from sea. Perfectly sheltered harbor with many miles waterfront, suitable for railway terminals, coaling stations, warehouses, etc. Population (five miles radius), 132,000. Port's trade, salt, phosphate, iron, tar oil, etc. Exports, cotton, grain, staves, timber, cattle, coal (semi-bituminous and finest quality, 4,000,000 tons annually), meat, tobacco and general Western products.

The channel and wharves have 23 feet at low water; navy-yard, 26-8 low water. Government now improving channel to 30 feet low water; normal rise and fall, 2 feet 8 inches; 12,000-ton battleships have been to navy-yard on draft of 27 to 28 feet. Merchant vessels of 11,000 tons (gross) on draft of 30-6 have been accommodated in channel and at docks for loading and bunkering.

Two large drydocks and shipping plant for heaviest work at Newport News, 12 miles distant.

Navy-yard, at which are three drydocks, 332-5, 500 and 600 feet; 25 feet, 25-3 and 34 feet on sills. Bunkering depot for Pocahontas and other fine steam coal. Three most modern coal piers; also fine merchandise piers for loading and discharging. Terminus of Tidewater Railway (now Virginian), 18 miles from sea; to be in operation spring of 1909. Normal strength current in river and harbor, one and one-half miles. Other railroads centering here are Norfolk & Western, Seaboard Air Line, Southern, Norfolk & Southern, Chesapeake & Ohio, New York, Pennsylvania & Norfolk Railway and the Atlantic Coast Line.

Seventy-five thousand tons (net) fine coastwise passenger and freight steamers; numerous passenger and freight steamers patronize bay and rivers. Unequaled geographically for reception and distribution of commodities. United States engineers report for fiscal year ending June, 1905, for water-borne commerce entering and leaving Norfolk from and to all points, foreign, coastwise and rivers (value), \$720,000,000.

Norfolk, Va.

Salisbury's Invitation.

Chas. C. Adams & Co., Salisbury, N. C., write to the MANUFACTURERS' RECORD:

"Allow us to congratulate you and your great paper for the great work that you are doing in behalf of this South of ours and her people. We look forward to the coming of the MANUFACTURERS' RECORD, as it is full of valuable information to us, and we are also able to see what is being done throughout the South.

"Let us say a word about this wide-awake town of ours. It is situated a fraction over 300 miles south of Washington, D. C., on the main line of the Southern Railway. We have cotton mills, furniture factories, flour mills, one of the largest railway shops in the South, employing fully 2000 men, good street railway, four banks, 15 churches, splendid water-works,

one of the largest opera-houses in the State, mattress factory and others too numerous to mention. We also have at our doors one of the largest power plants in the United States, on which they have spent something over \$5,000,000, and which will soon be completed, when they will be able to furnish power to all the plants that we can get located around us, and at a very cheap rate. Our farming lands cannot be surpassed in the State. We will welcome any correspondence that will help to bring to this wonderful land any class who are looking for investments or farms, or with the idea of locating factories. Our labor conditions are good.

"Again, let us say to you that we people of the South will never forget your good work, and when we are all gone you will have left a monument that will stand on until the end."

WEALTH FROM FARMS.

Nearly \$8,000,000,000 This Year's Estimate of Its Aggregate.

The farm value of all farm products of 1908, according to the estimate of Secretary Wilson of the Department of Agriculture, reaches the most extraordinary total in the nation's history—\$7,778,000,000. This is about four times the value of the products of the mines, including mineral oils and precious metals. The farmer contributes 87 per cent. of the raw materials used in those manufacturing industries which depend mostly or considerably upon agricultural materials, and these industries use 42 per cent. of all materials used in all industries.

The gain in value of farm products in 1908 over 1907 is \$290,000,000, and would have been much larger had not the prices of cotton and hay been low. The value of products in 1899, the census year, being taken at 100, the value for 1903 stands at 125; for 1904, at 131; for 1905, at 134; for 1906, at 143; for 1907, at 159, and for 1908, at 165. During the last 10 years the wealth production on the farm of this country has exceeded the fabulous sum of \$60,000,000,000.

Greatest of all crops is Indian corn, whose production this year is 2,643,000,000 bushels. The value of this crop is \$1,615,000,000. This wealth, grown out of the soil in four months of rain, sunshine and some drought is enough to cancel the interest-bearing debt of the United States and to pay for the Panama Canal and 50 battleships. This crop is worth this year nearly as much as the great crops of cotton, hay and wheat combined. Compared with the averages of the preceding five years, the quantity is 2 per cent. higher and the value 43 per cent. higher.

It seems likely that the cotton crop is one of the highest three ever produced, but with a value next to the highest or perhaps more, although the farm price of cotton this year is below the price of last year by more than one cent.

The greatest hay crop in history has been gathered this year, 68,000,000 tons, or 12 per cent. above the average of the preceding five years. Its price is \$2 per ton less than it was a year ago, but still the farm value of the crop is \$621,000,000, or 6 per cent. above the five-year average.

Wheat is 1½ per cent. above the five-year average in production and 23 per cent. above in total value. The 660,000,000 bushels of this crop are estimated to be worth \$620,000,000 to the farmers, or \$66,000,000 more than the most valuable wheat crop heretofore produced.

Although the oat crop suffered from drought, the value is \$321,000,000 for 780,000,000 bushels, or 10 per cent. above the five-year average value and 9 per cent. below the average product.

The barley crop, 167,000,000 bushels, is 13 per cent. above the five-year average,

and its value, \$86,000,000, is 23 per cent. above. Both have been exceeded only once.

Rye remains in the notch that it has occupied in production in recent years, but its value, \$22,000,000, is 17 per cent. above the average.

The largest crop of rice ever raised, 23,000,000 bushels, is this year's, with a value of about \$18,000,000, the crop being 29 per cent. above the five-year average and its value 23 per cent. above.

All cereals aggregate 4,329,000,000 bushels, a total that has been exceeded three times, but the value reaches \$2,694,000,000, or more than \$300,000,000 above that of 1907, and exceeds still more the totals of former years. Compared with the preceding five years, the number of bushels is higher by 0.2 per cent. and the value is higher by 32 per cent.

The sugar-beet crop has never been so large nor so valuable as it is this year. The rapid development of this crop for sugar-making appears in the statement that the production of beets in 1908 is 45 per cent. above the average of five years.

The plantation value of sugar-cane, molasses and syrup, not including factory products, is estimated to be \$34,000,000, a value exceeded only in 1904, and greater than the five-year average by 10 per cent.

Nearly 500,000 short tons of beet sugar will probably be made from the crop of this year, and the factory value of this and of the beet pulp is about \$45,000,000. About 407,000 short tons of raw cane sugar were produced this year, an amount perceptibly greater than the high production figures of four or five former years.

The sugar beet and sugar-cane crops are together worth about \$56,000,000 to the grower. The sugar made from cane and beets, the beet pulp, the syrup and molasses of cane and sorghum, and the maple sugar and syrup, it is estimated, are worth this year \$94,000,000.

Unfavorable weather made the potato crop only 275,000,000 bushels, or 5 per cent. below the five-year average, although the value, \$190,000,000, is 18 per cent. above and was never equaled by any former crop.

Tobacco production is still low in comparison with recent years, but the price is probably a little above that of 1907, when there was a decided increase above former years. The value of this crop is about the same as for 1907, and is higher than at any time before that year.

On account of the extremely low price of hops in 1907, the average production and value of 1908 are low and have been exceeded in many former years.

For the first time, this year, the value of all farm crops equals \$5,000,000,000, and of this total, the value of the corn crop is about one-third; wheat, hay and cotton combined make more than another third, and the smaller crops the remainder, or nearly one-third. Never before has the hay crop been so large in quantity, nor the rice crop, nor the sugar-beet crop, nor beet and cane sugar production. The production of barley has been exceeded in only one former year, and cotton by only two years at the most.

The highest crop values in comparison with former years are held by corn, wheat, rice, all cereals, potatoes, sugar beets, possibly tobacco, by beet sugar and by beet and cane sugar combined. Next to the highest value was reached by hay, barley, oats, sugar-cane and cane sugar, and perhaps by cotton.

Although the farmer gets hardly 20 cents a pound for his butter, between three and four cents a quart for his milk, and about one and one-half cents for each egg, yet the value of the farm products of the dairy cow is getting close to \$800,000,000, and the value of the eggs and poultry produced on the farm is worth as much as

the cotton crop, seed included, or the hay crop, or the wheat crop. The aggregate value of animals sold and slaughtered and of animal products at the farm amounts to about three-eighths of the value of all farm products, estimated upon the census basis, and is getting nearer and nearer to \$3,000,000,000.

SURPRISED THE MARKET.

The Demand for Iron in the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., December 14.

The remark is often made that the iron market is full of surprises. The market last week was one of them. Everybody anticipated that there would be an easing off in the demand, and that the week would be a very quiet one. But for once wiseness was wrong in their estimate of conditions. Considering the season of the year, we had a fine demand, and what was more surprising, there was an increased firmness in the price. The Sloss-Sheffield Company reports its sales so far for this month at full 20,000 tons. Of this amount, 7000 tons were sales made the last half of the week, and 3000 tons of this went to one firm. And it did not go West. Some of the pipe companies missed getting into the swim earlier in the game, and have had to pay higher values than were current a short while back. Your correspondent has from excellent authority the information that one of the belated buying pipe companies manfully walked up the past week and paid \$13.25 for 6000 tons and \$13.50 for 8000 tons. Of course, the buyer got the delivery he wanted. Just what that is is closely guarded. One firm said to your correspondent that it had sold in the last few days 20,000 tons to the pipe companies, of which 13,500 went to one company, and that after it had placed about 2600 tons more it would have no more iron to sell to the pipe interests for the first half, as they had taken the anticipated output for the first half of 1909 of the grades they desired.

Some of the sellers will be kept busy during the first half of 1909 in evening up deliveries. The character of the buying the past week is conclusive of the fact that there is a good sprinkling of requirements not yet provided for, and it may be that the usual dullness of the season will not prevail this year. There was a marking up of prices the last day of the week, and after the few lots on which options have been given are cleaned up a higher range of values will be asked, and it will be obtained. This is what generally accompanies present market conditions.

The following sales show market conditions: A sale of 300 tons of Clifton brand was reported at \$14 for spot delivery, basis No. 2 foundry. The Clifton, as the trade knows, is high manganese iron. The Etowah brand sold on a \$13 basis for No. 2 foundry. One sale is reported for December delivery on the basis of \$13 for No. 2 foundry, and a number of other sales, aggregating 15,000 tons, were sold on the same basis for delivery the first quarter of 1909. Some 3 per cent. silicon iron was also sold on a \$13.50 basis, same delivery. Another lot of 600 tons of No. 2 foundry was sold on the basis of \$13, and another lot of 150 tons of No. 3 foundry went on the same basis for first quarter delivery. In the way of charcoal iron there is very little offering, and that is confined to the one grade of No. 1.

The sales could and would have been larger but for the fact that some of the interests have practically withdrawn from the market. By that it is meant that they have withdrawn from the general market, and are not seeking buyers, but are compelled to take care of their trade, and they are in to that extent. The largest seller

among them said to your correspondent: "We have not sought any business, and what has come to us was without effort on our part. We are getting more than we want, and are refusing more than we are accepting." The quarterly report of the Sloss-Sheffield Company has been issued, and makes the handsome showing of profits from operations during the quarter ending November 30 of \$493,935.16. According to its reports previously rendered, the profits from operations the first quarter were, in round numbers, \$100,000, and for the second quarter \$231,000, and for the third quarter \$352,000. Considering the conditions surrounding furnace operations during the past year, the showing is convincing that under prudent management it is yet possible to make a decent living from furnace operations. We now have 23 furnaces in operation, and are almost up to normal in the way of output.

The market for scrap iron has been without interest except for the fact that it is very strongly held. The business transacted was of only moderate volume. Quotations are firmly maintained, as a rule, and holders are firm in the faith that prices will be better. The firmness with which prices are held makes a slow market. Quotations as furnished by Weller & Co. are as follows:

Old iron axles, \$17.50.
Old steel axles, \$16.25.
Old iron rails, \$16.50.
Old car wheels, \$14.
No. 1 railroad wrought, \$14.
No. 2 railroad wrought, \$12.75.
No. 1 country wrought, \$11.50.
No. 2 country wrought, \$10.50.
No. 1 malleable, \$11.50.
Wrought-iron pipes and flues, \$11.50.
No. 1 steel, \$11.
Stove plate, \$9.50.
Cast borings, \$7.

There is nothing new of special concern in the cast-iron pipe trade. Specifications keep coming in, and there are yet good "pickings" for the trade, with enough to go around and give all a bite at the cherries offering. The past week one train of 35 cars was sent out from Bessemer for account of the United States Pipe Co., loaded exclusively with cast-iron pipe and destined for the Island of Cuba. The shipment was billed by way of Pensacola. Other shipments of good volume are made every week by the pipe interests, and their order-books show the evidence of a very satisfactory business. The fact that since the 25th of October it is estimated that the pipe companies have bought considerably in excess of 100,000 tons of iron is the best evidence of the activity of business with them. It was known that they had been free buyers, but few anticipated that their buying was so heavy. J. M. K.

To Be a Corporation.

[Special Dispatch to Manufacturers' Record.]
Birmingham, Ala., December 16.

Loveman, Joseph & Loeb, department store, will change into a corporation with a capitalization of \$3,000,000. There will be issued preferred stock of \$1,000,000 and common stock of \$2,000,000. The proposition has been underwritten, and it only remains to file the articles of incorporation in court to complete the change.

J. M. K.

Looks for Prosperity.

Mr. J. R. Monroe, president and treasurer Ocmulgee Brick Co., Abbeville, Ga., writes to the MANUFACTURERS' RECORD:

"In my line, real estate, the tendency is upward, as will be shown by the enclosed clipping. I am having demands for farm lands now, and fair prices are being easily obtained. We have a fine prospect for two new railroads. The American Railway Co. has applied for charter for road from Haw-

kinsville to Abbeville, Grovania and Winchester, and the Abbeville & Northwestern, for one from Abbeville to Montezuma. Both companies claim they will be in partial operation by March 1, 1909. As I see it, 1909 will be a prosperous year for the South."

COAL AND CHARLESTON.

Developments Interesting West Virginia Capital.

[Special Cor. Manufacturers' Record.]
Charleston, W. Va., December 12.

The appeal of the coal operators of the Kanawha field to the miners to make a new agreement, putting the unionized Kanawha mines on a competitive basis with the non-union mines with which they are surrounded, has come to a definite adverse end, and the coal business just now has a rather gloomy outlook. The request of the operators was first submitted to the National Board of the Mine Workers of America, and by it refused. Then the operators asked that a delegate convention of District No. 17 be called to consider the matter. That was done, and the convention held a meeting in this city two weeks ago. That meeting failed to grant the relief asked, and this week there was a joint meeting of miners and operators. It lasted two or three days, and was the scene of a good deal of pretty warm discussion, and the final outcome was a failure to agree upon anything that would relieve the situation. The operators, before the meeting dissolved, declared that they considered the denial of their request by the miners to be an abrogation of the agreement entered into last April, and that they would proceed to deal with their men individually and attempt to get them to work upon such terms as they could.

A serious break between the operators and their miners at this time would be a very severe blow to this section, as the coal business has been bad for more than a year, and to have a strike on top of what has been already suffered would be hard luck for both sides of the controversy. The operators would be kept out of the opportunity to make whatever profit could be taken in their business in its present low state, and many contracts would be cancelled and heavy loss entailed in other ways. For the miners to be thrown out of work entirely in the face of the approaching winter would bring suffering and distress to themselves and their families, and would cause many of them to leave the field to find work wherever it is to be secured. General business would be greatly affected, and paralysis would strike numerous enterprises throughout the entire field. However, the worst is never here until it arrives, and as long as a strike is not ordered there is room for hope that it is not to be.

The extremely low water which has prevailed in the Ohio River for many months has caused a congestion of loaded coal barges in the Kanawha River, and coal men have looked longingly for tidings of rains that will bring relief from that condition. The Kanawha River has been locked and dammed from its mouth into the coal field, and loaded barges can be run at all seasons of the year. But as soon as the waters of the Ohio are reached, then must Nature be depended upon to do her part, and the remainder of the journey to the down-river markets are only to be made by her permission. The barges are dropped to the mouth of the Kanawha as soon as loaded at the mines, there to wait for sufficient water to bear them on their way. There are now lying in the various pools in the Kanawha, most of them at the mouth, about 350 barges, carrying something like 5,000,000 bushels of coal—200,000 tons. The business men of this

section, therefore, take a very natural interest in the plan to deepen the Ohio River, and no part of the country will benefit more by the great work. With the nine-foot stage in the Ohio the year through, coal could be run to market as it is mined, and operators would not be compelled to hold hundreds of thousands of dollars' worth of their output for months at a time, as they are doing now. The great danger of loss by ice would also be reduced to the minimum, and the scheme would prove profitable all around.

The State Board of Trade at its recent annual meeting adopted a resolution looking to an excursion of West Virginia business men to 10 Eastern cities, with a view to meeting the commercial organizations of those cities and striving to impress upon the minds of their members some of the advantages offered by West Virginia as a place for profitable investment and the eligible location of manufacturing and commercial enterprises. While the details of the plan are still somewhat inchoate, still the idea generally stated is to carry along some attractive literature for distribution, and also some well-posted speakers who could tell in probably impressive terms of what this State has to offer. The trip will be made on a special train of sleepers and diners, and the cities tentatively proposed for the visit are Cleveland, Albany, Buffalo, Providence, Hartford, Boston, New York, Trenton, Philadelphia and Washington. A committee of 10 has been appointed to arrange the details of the visit, as follows: Mr. W. A. Wilson, Wheeling, chairman; ex-Governor A. B. White, ex-Governor W. A. MacCorkle, Hon. George C. Sturgiss, Mr. George Byrne, Mr. G. W. Lutz, Mr. Charles Capito, Hon. Howard Sutherland, Mr. R. B. Naylor and Mr. H. R. Warfield.

While a good many of West Virginia's enterprising citizens have made vigorous personal efforts at various times to attract the attention of outside men of money to the State, there has never been a concerted effort to bring the State to the attention of investors, and the one now proposed is only what should have been inaugurated long ago. There are so many natural advantages lying dormant for lack of capital to develop them that it seems almost unbelievable. The matter of water-power alone is one that should engage the attention of millions of capital. The New River, the Gauley, the Tygart's Valley, the Cheat, the Greenbrier—these and numbers of other streams abound in sites for water-power that could easily and with comparative cheapness be developed and utilized to the great profit of the investors and the great benefit of various communities. Not one of these sites for power but lies within such short distance of some of the larger cities that there, if not within the State's own borders, could ready market be found for thousands of horse-power reduced to the electric current and thus easily led to the place of consumption.

West Virginia also presents unequalled facilities for the manufacture of cement, for the reason that the things essential in the production of that highly useful article of commerce are found here in such abundance and in such close proximity. There is no reason to ship either the limestone and other ingredients a great distance to the coal used in reducing them, or the coal a great distance to the ingredients, when all can be found close together, as they are in this State. It is false economy to erect factories for producing staples anywhere except at those points where the production can be accomplished most cheaply, and surely in the manufacture of cement West Virginia should hold a place in the front rank.

And so it is in many other things that should be made known to men of money

and enterprise. Publicity is the Midas touch that must bring wealth to this Commonwealth. Therefore, the proposed visit of West Virginia business men to the cities and communities where men of money make their homes is a proposition of first importance to the State at large.

The zone of gas production is gradually being brought nearer and nearer to this city. A few days ago a big gasser was brought in by Crawford & Ashby on Coopers Creek, in Kanawha county, only seven miles from Charleston. It is estimated to have a production of 2,000,000 feet daily. These big strikes, being constantly made in an ever-widening boundary, give assurance that the natural gas supply for this town will not be exhausted for many years, and so surely has the development approached Charleston that nobody would be surprised to wake up any fine morning and learn that a big strike had been made within the corporate limits of the city. It gives the men who have pitched their manufacturing tents here a feeling of ease and security, so far as the fuel supply is concerned, reaching far into the future.

The South Penn Oil Co. brought in a well on Horse Creek, in Boone county, a few days ago that shows the Lincoln county field to be of greater extent than had been known hitherto. The new well is several miles from any other, and is calculated to give a new impetus to the development of the field.

Meantime, drills are going down in many directions from the approved fields, and it is confidently expected that new strikes will be reported within a few days showing the discovery of new pools or marking a very much wider boundary for those already tapped. GEO. BYRNE.

SOUTHERN PROSPERITY.

Broad Views of Equipment for Development.

Philip J. Goodhart of P. J. Goodhart & Co., New York, writes to the MANUFACTURERS' RECORD, referring to the prospects of prosperity for the South, as follows:

"In my opinion, the South today, industrially and agriculturally, has brighter prospects than at any time in its history. The completion of the Panama Canal will inure to the benefit of that section of our country more than to that of any other. Few of us are able to foresee with any definiteness the effect of so gigantic a project as the turning of the tide of the world's commerce, but I have no doubt that the harbor cities of the South and the contiguous territory will benefit far more than did the Mediterranean cities and Southern Europe from the completion of the Suez Canal. The reawakening of Italy and Southern Europe dated from that time. The completion of the Panama Canal under the energetic and effective work of Mr. Goethals and his able assistants is not as far off as most people think. Its completion will put the South in closer communication with the many South American States, as well as the Far East. These countries are large consumers of cotton cloth. A leading Congressman of the South some years ago spoke of the Southern planter as the only agricultural monopolist in the world. The tendency of that section has been not only to produce its cotton, but to steadily increase the manufacture of it as well, and the less the distance between the Southern States and the ultimate market, the greater will be the increase of the home manufacture. Increased agricultural production and increased manufacturing interests depend on the encouragement which the South itself will give during the next years to the employment of new capital and of new labor. Lately there has come into our possession a book that enjoyed a wide circulation 40 years ago, a book called 'Ten Acres

Enough.' We beg to quote from it the following:

"Throughout Europe a passion to become the owner of land is universal, while the difficulty of gratifying it is infinitely greater than with us. It is there enormously dear; here it is absurdly cheap. It is from this universal passion that the vast annual immigration to this country derives its mighty impulse. As it reaches our shores it spreads itself over the country in search of cheap land. Many of the most flourishing Western States have been built up by the astonishing influx of immigrants."

"No greater comment on the advantages of immigration could be expressed. Immigration means at once securing producer and consumer. The railroads of the South are doing in their development departments all they can toward this end, but they need the encouragement and help of every individual, and, in our opinion, it would be appreciated. In conclusion, I wish to say that your work in the upbuilding of the South industrially, agriculturally, and in educational work as well, has been aggressive, effective and honest. Nothing that we have ever read in your publication has impressed us otherwise. Your work has been devoted to no special interest, but has been for the benefit of the whole section. The MANUFACTURERS' RECORD has been the mirror to show the South and the whole country what 'was doing' and suggesting what 'could be done.'"

C. Townsend Blake, president Public Service Co., Chickasha, Okla., writes:

"I have read with considerable interest the interview with Mr. Brady. My experience has been somewhat along the same line. It was hard work to get my Northern associates started operating in this section, but when they became fully alive to the opportunities offered they started, and started in right. They have closed contracts to date covering the investment of \$1,600,000 in three corporations covering water-power, electric-light, gas and electric railway properties, and if I can get other good projects I can get the money to develop them. In my opinion, there is no better channel for Northern money than now open in Southern States, and I am so recommending to my associates."

Bearing upon a letter to President Washburn of the Muscle Shoals Hydro-Electric Power Co. of New York, Vice-President Charles H. Baker of the company writes to the MANUFACTURERS' RECORD:

"I think the confidence of Mr. Washburn and myself in the present and future improvement of the New South is well shown by the fact that our two principal enterprises are calculated to receive their greatest development in the South, in the full confidence upon our part that they will yield us large returns. I refer to our water-power developments in Alabama, and to the Cyanamid Company, having for its purpose the fixation of atmospheric nitrogen for the manufacture of fertilizer. In turning my personal attention to the South I am, as you will recall, diverting myself from the scene of my fifteen years of past activities in the Puget Sound country. We all know the great improvement of the Puget Sound country, and the fortunes it has made for people. We know its commercial relations to the Orient and to Pacific Coast business in general. We know the inherent wealth there of its mines, its lumber, its water-power resources, its manufactures and its commerce generally, and yet I regard the Puget Sound country as only in its youth at present. In giving up that country and all its possibilities I personally felt that I went to greater possibilities and prospects by casting my lot with the South, and this act speaks more forcibly than

any words I can utter as to my opinion of the New South as a field for investment in any line consistent with the location. I look upon the South as a duplication of what I have seen in the far Northwest, and those who go there now I feel are in the front of the procession of the many who will realize fortunes there."

Samuel R. MacLean, selected legal and guaranteed securities, London, E. C., England, writes:

"Having carefully perused Mr. Brady's statements relating to his confidence and suggestions concerning investments in the Southern States, I would gladly endorse same as most wise and consistent, and I am pleased to learn that he is succeeding in interesting New York brokers in undertaking his hydro-electric development, for my own several personal visits over the States taught me that there existed many natural facilities therefor, etc. Several years ago, when visiting among the middle Southern States, I invested in some growing townsites and timber lands, feeling they must increase in value, as they have done. Your enterprising journal has been a wonderful aid to my knowledge of the steady development of the various Southern States, whose people also owe you a great debt of gratitude for your clever and systematic way of presenting to the minds of the reading public the factors of steadily-increasing growth at each and every section thereof. My old Boston friends have especially been large investors in cotton factories and in productive lands, as Dr. Wylie and friends have asserted their confidence through furnishing large means for the development of electric power in the State of North Carolina, when also some old Pittsburg and Pennsylvania friends have invested largely in rich mining and manufacturing developments with reported advantage. Whilst that State is known to possess many natural resources, other Southern States are known to have special resources for ready development by investors generally. It is really surprising how many sensible investors and working people (developers) have been otherwise attracted by liberal advertising to the great Western States, many of which do not offer the many advantages which the South has, especially in the way of climate, comfort, health, etc. It would seem that the Southern boards of trade and commercial organizations have been unduly slow or reticent in their natural duty to enlighten the world concerning the rich characteristics of their own native heath; in fact, it would seem to me (as I have often heard it expressed) that the earnest, sound and active presentment for years of the advantages the South naturally possesses for the locator and investor as made by your able journal has realized more good results than all the other means undertaken in that line. Now, I have also been visiting this country and Europe annually since 1878 for negotiating American bond and mortgage issues, and you would be surprised at the steady growth of favor developed abroad for our investments; in fact, they have become the favorite of all other national securities for investment. These factors lead me to suggest and urge that all public representatives of the various Southern States interested in securing more capital and other means to develop their singularly rich resources should unite in establishing a special bureau at London like the Canadian Pacific Railway people have done for their welfare with such magnanimous results."

Leesburg, Fla.

Among the many small but progressive cities of the South is Leesburg, Fla., which has a population of about 1400. Leesburg is located on the hills between Lakes Grif-

fin and Harris, the former being the head of navigation for the Ocklawaha River. It is planned to have a public water-works and electric-light plant, for which the officials are prepared to expend \$2000 per annum. Propositions are invited for a five-year contract, and a thirty-year franchise for domestic service is offered. L. M. Johnson, city clerk, can be addressed regarding these plants. Leesburg also needs a plant to supply boxes, crates and baskets for growers of oranges, lettuce, cabbage, cucumbers and other products. About 200,000 boxes of oranges are shipped annually from the vicinity of Leesburg, and the boxes used are purchased at other points. A weekly newspaper is also needed. The Citizens' Bank of Leesburg can furnish information relative to the advantages for the box factory and newspaper.

SOUTHERN IMPROVEMENT.

Development in the Illinois Central Railroad's Territory.

Mr. J. C. Clair, industrial commissioner Illinois Central Railroad Co., Chicago, Ill., writes to the MANUFACTURERS' RECORD:

"Of late there has been a decided improvement in industrial matters in the Southern territory tributary to the Illinois Central Railroad, and commercial activity is increasing. This was particularly noticeable on the trip I recently made with the delegation of the Chicago Association of Commerce through the Mississippi Valley, comprising 30 members, representing several hundred Chicago firms as well as the press. We traveled through six Southern States, namely, Kentucky, Tennessee, Arkansas, Mississippi, Louisiana and Alabama, and visited 17 cities. The majority of the party had never before been south of the Ohio River, and they were astounded at the wonderful natural resources of the Mississippi Valley, the great commercial growth of the Southern country, as well as her possibilities for the future. All were ready to accept the motto of the MANUFACTURERS' RECORD—'The development of the South means the enrichment of the Nation.' We found the people optimistic at every point visited, business conditions constantly improving, and every member of the delegation returned to Chicago feeling the two weeks of travel in the South had added very materially to his knowledge and education."

"About two years ago there was organized in Chicago the American Railway Industrial Association, representing all the railroads of the United States and Canada having industrial departments. The annual meeting of this association for 1907 was held in St. Louis, at which time it was decided to hold the next regular meeting in Cincinnati in May, 1909, but in view of the improved business conditions throughout the country, and considering the importance of the members conferring with each other along industrial lines at this time, it was deemed wise to call a special meeting for January 22 next, and appreciating the great commercial progress of the South, Birmingham, Ala., has been chosen as the place for this special meeting."

"With the large cotton crop for 1908, also sugar cane, rice and other agricultural products, increased Southern trade must necessarily follow, and it is safe to say we are on the eve of renewed prosperity, provided there is no further hampering of the railroads through adverse legislation, etc."

"The Illinois Central Railroad Co. being especially interested in the general development of the territory which it serves in the South, and recognizing at this time the destruction to the cotton crop by the boll-weevil, this company is

anxious and ready to co-operate in bringing about any possible measure that will prove of value to the planter in his efforts to combat the effects of this insect. President Harahan, co-operating with the Agricultural and Mechanical College of Mississippi, has arranged with Professor Hardy to run a 'Boll-Weevil and Diversified-Farming Special Train' over our lines in Mississippi December 14 to 19, inclusive, accompanied by professors of the Agricultural and Mechanical College; Mr. H. E. Blakeslee, Commissioner of Agriculture, of Jackson, Miss.; Mr. H. C. Stringfellow, boll-weevil expert, and others, who will deliver lectures to the cotton planters on how best to deal with the boll-weevil. Diversified farming will also be touched upon, a subject which is being given careful study more and more every year, and which, if followed up, will eventually result in Mississippi becoming one of the greatest agricultural States in the Union."

BUILDING IN JACKSONVILLE.

Notable Betterment Following Recovery From Disaster.

[Special Cor. Manufacturers' Record.]
Jacksonville, Fla., December 11.

Less than eight years ago the city of Jacksonville, the metropolis of Florida, was swept by a great fire—a conflagration which destroyed in six hours whole blocks in the very heart of the city and laid in ashes more than 2000 buildings. The area over which this disaster swept comprised over 650 acres of land, involving a loss of \$15,000,000, one-third of which only was covered by insurance. Yet today that fire is but a memory with the people of that



ATLANTIC NATIONAL BANK, JACKSONVILLE.

city, and not a vestige of the destruction is to be seen anywhere. In place of what were formerly mere ruins, now are to be seen many of the principal office and public buildings, as well as numbers of costly and elegant residences. With what rapidity and in what measure the city has grown since that memorable disaster is, perhaps, best evidenced by an observation of the city's present business activity, and likewise the very high-class order of structures now being erected. Following the fire, and almost immediately thereafter, there sprang up with a wonderful degree of swiftness many five-story buildings, and these came to be regarded by the people as "skyscrapers." Today, however, with the erection of large 10-story buildings, those of five stories seem as nothing. All over the city are to be seen immense structures moving skyward, and, indeed, in no city in the United States of like size is there such a continuous change of sky line.

At the end of last October the building records of the city showed that 8067 new buildings had been erected since May 3, 1901, which was the date of the fire. This is an approximate average of over 1000 a year, giving striking illustration of the remarkable manner in which the city is expanding. The record for November alone shows that permits were issued for 80 buildings inside the city limits, and it is safe to say that at least 50 new buildings were erected in the suburbs, just outside the city limits, during the month. The records show, too, that during the previous month permits were granted for the erection of 73 new buildings, a total of 153 buildings in the last two months. Should this average continue for a year it

duced. The entire building will be cleaned by a system of vacuum, which does away with the old method of sweeping and its disagreeable features of flying dirt particles and dust. In each office will be installed a process of ice-water piping, which will supply each office with ice water from the faucets. The architect is H. J. Klutho of Jacksonville, and the contractors are W. T. Hadow & Co. of Jacksonville.

The work of constructing the substantial Atlantic Bank building, situated on Forsyth street, just east of the postoffice, is progressing rapidly. The foundations of this structure have been most substantially laid, and now the great steel framework is taking definite shape. The exterior walls of this building are to be of pressed



COMMERCIAL BANK, JACKSONVILLE.

would mean something like over 900 buildings in 12 months. But take an average of 70 new buildings inside the city limits and 50 outside every month, and it will be seen that this means the erection of 120 new buildings every month, or 1440 a year. From these figures, therefore, it is quite evident that no city in the country of its size, and of much larger population even, can equal such a record.

Chief among the new modern structures now in course of erection is the W. A. Bisbee building. This is to be an office building of 10 stories, located on the north side of Forsyth street, between Main and Laura streets. The concrete framework of this building has been completed, inclusive of the tenth floor, and it is the highest object in the city, with the exception of the cupola on the Government building. When completed this will be one of the handsomest and most complete office buildings in the South. It will be supplied with every modern appliance for the convenience and comfort of tenants known to advance art of architectural construction and building skill. The building will be fireproof, and all the latest improvements in modern fireproof buildings will be intro-

duced. The ground floors of this building will be used by the Atlantic Bank for banking purposes, while the upper floors will be given over exclusively to offices. This building will also be installed with the vacuum system of cleaning, as well as every modern convenience. The contract calls for completion of the building by June 1, 1909. The contractors are Stewart & Co. of Pittsburg, and the architects are Mowbray & Uffinger of New York.

Another large building is the Commercial Bank building. This is being erected by the Ucita Investment Co. at the southwest corner of Forsyth and Hogan streets, and is showing indications of soon lifting the walls above the surrounding streets. The foundations have been practically completed, and the work of putting up the steel skeleton framework will commence in a few days. This structure covers an immense space, being 100x105 feet, and it is claimed it will have more office space than any other office building in the South. It will be 10 stories in height, with a basement, which will be used as a rathskeller. The building is of absolutely fireproof construction, built on the "skele-

ton steel-frame" system, having steel columns, girders and floor beams. The archings, floors and partitions are each constructed of fireproof materials. Each office is equipped for messenger and telephone service, and the Cutler United States Mail Chute is used, connecting each floor with a letter-box in main hall. The contractor is the St. John's Constructing Co. of Jacksonville, and the architect is H. J. Klutho, also of this city.

The new Masonic Temple building, which is one of the finest fraternal homes in the entire country, is practically finished. This building is seven stories in height, and is constructed of reinforced concrete, and will be a credit to the city and its builders. The architect is L. M. Weathers of Memphis, Tenn., and the contractor is H. P. Heifner of Atlanta, Ga.

Another magnificent structure which is characteristic of new Jacksonville is the new home of the Young Men's Christian Association, now being erected at the northeast corner of Laura and Duval streets. This building is seven stories, and constructed of reinforced concrete, and, being situated on one of the highest sites in the city, it towers an imposing structure above the city. This building is to be used entirely by the association, and is equipped with every modern convenience for use of young men, including gymnasium, swimming-pools and a roof garden on the top of the building. The architect is H. J. Klutho, and the contractor is Henry Green, both of this city.

Another new structure is the spacious Van Deman building, located at 806 to 810 West Bay street, almost completed, and being erected by the Conrad Building Co., of which F. W. King is president. The structure is of Bond sandstone Florida brick, and is 185x60 feet, at a cost of \$50,000, and to be used for warehouse and storage purposes.

The King building, nearing completion, is located at 746 to 752 West Bay street, and is 175x65 feet, owned and occupied by F. W. King, wholesale confectioner.

Many other lesser buildings are being constructed and completed every day, which emphasizes the remarkable steadiness of the building growth and expansion of the city.

DE WITT C. REED.

Big Drainage District Proposed.

The Commissioners of Harris county, Houston, Texas, will soon consider one of the largest drainage propositions ever proposed. It will take in all of the southwestern portion of Harris county, commencing at Brays and Slaughter Pen bayous and extending to the county line. The district, as planned by George B. Griggs, secretary of the South Texas Drainage Association, comprises over 100,000 acres of land. It is proposed to issue bonds and expend about \$200,000 in the improvement of land to the assessed valuation at this time of about \$10,000,000.

The new district is adjacent to the Alameda and Dairy districts, and extends the area of improvement over all that corner of the county bordering on Fort Bend and Brazoria counties. The district is described as particularly rich in possibilities once the ditches are in use. A flourishing agricultural country immediately tributary to Houston is being established.

At the same time the clearing of Brays and Slaughter Pen bayous is expected to be of material assistance in the drainage of large parts of the Third and Fourth wards.

It was originally proposed to include the Third and Fourth wards in the district, but the fact that the city of Houston recently voted for \$500,000 worth of bonds warranted the belief that the city would obtain sufficient improvement from that

amount without being obliged to join in with the county people for the issuance of drainage bonds.

Memphis Business Men's Club.

[Special Cor. Manufacturers' Record.]
Memphis, Tenn., December 11.

To raise additional funds for securing conventions and then properly entertaining the delegates; to bring outside merchants to the city; to advertise her many advantages, the Memphis Business Men's Club has instituted an industrial bureau, and will invite industrial memberships separate and distinct from those enjoyed by private citizens and ordinary business and professional men. Industrial membership dues are to be used entirely for industrial purposes, and are to be proportioned to the financial standing and beneficial advantages to be reaped by hotels, land companies and others over and above the smaller caliber citizen.

The Memphis Business Men's Club occupies one of the most modern buildings ever erected for similar purposes; the social feature and noon-hour lunch is a tremendous success; many creditable civic undertakings have been pushed through by the hard work of its members, and the prediction has confidently been made that \$25,000 will be raised by the industrial memberships.

The Cotton Movement.

In his report for December 11 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 102 days of the present season was 7,300,985 bales, an increase of 1,940,571 bales over the same period last year. The exports were 3,737,495 bales, an increase of 848,701 bales. The takings were, by Northern spinners, 1,177,058 bales, an increase of 574,800 bales; by Southern spinners, 780,770 bales, a decrease of 41,273 bales.

A special committee, Messrs. David B. Stewart of Baltimore, Orlando Harrison of Berlin and James G. Harris of Coleman, of the Maryland State Horticultural Society, has been appointed to draft a law for enactment by the next General Assembly requiring the use of uniform standard packages for fruits and vegetables. This action was a result of a report made by Mr. Stewart at the last meeting of the society, in which he advocated a requirement that when Maryland-grown fruit and vegetables shall be offered for sale in packages there shall be plainly stamped on the packages the measurements or cubic capacity and the manufacturer's name and address.

The Board of Trade of Fernandina, Fla., has prepared a comprehensive argument in favor of Cumberland Sound as a naval rendezvous and a port of refuge. The argument deals with the strategic value and the capacity and security of the harbor, its advantage as fresh-water anchorage, its defensibility, its accessibility to supplies, its salubrity and the depth of its water.

The Board of Trade of Winston-Salem, N. C., has elected Messrs. F. S. Verney, president; H. A. Pfohl and D. H. Blair, vice-presidents; H. F. Shaffner, treasurer, and R. W. Gorrell, G. E. Webb, H. E. Fries, R. C. Norfleet, E. W. O'Hanlon, D. S. Reid, F. J. Lipfert and H. W. Maslin, directors.

C. R. Denton of Glendale, Tenn., has raised this year, according to the Columbia Herald, from 12 acres of land two crops of Irish potatoes, which he has sold for \$4352, an average of about \$363 an acre.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

A NEW LINE IN TEXAS.

San Antonio & Rio Grande Not Chartered, But Has Considerable Grade Built.

Construction has been in progress for several weeks upon a new railroad, which is known as the San Antonio & Rio Grande, but concerning which little definite information has been obtainable. The San Antonio (Texas) Express publishes a dispatch saying that this new line starts from a point on the Hidalgo branch of the St. Louis, Brownsville & Mexico Railway, about midway between its termini, and it is expected to soon be in operation as far as Chapin, Texas, in Hidalgo county, perhaps early in the new year. According to this report, the beginning of the line would be near Mercedes, Texas, a station on the Brownsville road, and the dispatch says that S. A. Robertson, contractor and engineer, has made a survey northward to Falfurrias, Texas, on the San Antonio & Aransas Pass Railway, and from that point northwest to a connection with the Texas-Mexican Railroad. South from Mercedes, or near there, the new line is to be built to a point on the Rio Grande River near the San Juan plantation.

Mr. Robertson's contract, it is reported, is to build the new line north of Chapin about 10 miles to Lacombe, and this is to be completed before construction toward the Rio Grande is undertaken. Finally, however, it is intended to build northward to Falfurrias. A branch from Chapin to San Benito and Brownsville is contemplated, as well as another line from San Benito to Alta Vista, on the coast. It is reported that orders have been given for rails and other track material, and that 16 miles of grade have been completed from the Hidalgo branch to Chapin. The entire line to Lacombe will be about 25 miles long. Equipment has also been ordered.

The promoters of this new road are described as large property-holders in the section through which it will run, and it is said that E. C. Lassiter of Falfurrias, John Clossner of Hidalgo and J. M. Johnson of Mercedes are acting as trustees until a charter is taken out. D. B. Chapin has also been mentioned as one of those connected with the enterprise, which is designed to furnish direct railroad communication between the Rio Grande Valley and San Antonio.

NO DUST ON THIS ROAD.

Richmond, Fredericksburg & Potomac Is to Wash Its Ballast.

The seventy-sixth annual report of the Richmond, Fredericksburg & Potomac Railroad Co. has been issued in pamphlet form. It covers the fiscal year ended June 30, 1908. The company operates a total of 218 miles of line. The income account shows: Operating revenues \$2,003,114, increase as compared with the next preceding year \$21,307; operating expenses \$1,426,823, increase \$73,711; net operating revenues \$576,290, decrease \$52,404; gross income \$576,290, decrease \$57,472; net income after the payment of interest on the funded debt, taxes, hire of equipment, other interest and miscellaneous rents, \$404,358, decrease \$120,800. After the payment of dividends on stock and dividend obligations there was left from the net income \$79,312; balance to credit of profit and loss, \$257,988; balance to credit of special contingent fund, \$160,854. The total assets of the company are \$7,850,578, which includes the total cost of road and real estate, new construction and equipment, \$7,279,768.

The company laid during the year something more than three miles of double track with 100-pound steel rail, and that weight of rail is now used on most of the main line, the lightest weight on it being 75-pound rail, and it is expected to soon replace this with 100-pound steel. The road also bought six locomotives, 100 50-ton steel gondola cars and 200 steel under-frame box cars of 80,000 pounds capacity each. The company is also constructing a gravel-washing plant at Massaponax, the object being to remove from the gravel ballast fine sand or dust before it is used on the main tracks. By this means it is expected to obtain in the course of a few months a practically dustless railroad at an expense only slightly in excess of the present cost of unwashed gravel.

Atlanta & West Point Route.

The Atlanta & West Point Railroad Co. has issued its report covering the fiscal year ended June 30, 1908. The line is 85½ miles long from Atlanta to West Point, Ga. The financial statement shows: Total operating revenues \$1,151,791, decrease as compared with the year ended June 30, 1907, \$8989; total operating expenses \$916,405, increase \$184,379; net operating revenues \$235,385, decrease \$193,368; total income \$280,017, decrease \$157,048; net income surplus \$119,364, increase \$9490; balance to credit of profit and loss \$209,504.

The track is now laid with 80-pound steel rails. Among the construction during the year was a new warehouse at La Grange, Ga., which cost \$21,000. The La Grange combination depot was extended and remodeled at a cost of more than \$11,000. The hotel and passenger station at West Point were remodeled also at a cost of more than \$11,000. The company bought 75 box cars.

The report mentions eight of the leading new industries which were established on its lines at various points during the year, including fertilizer works, cotton ginneries, two cotton mills, two farmers' warehouses, etc.

The report of the Western Railway of Alabama, which is part of the same line as the preceding road, forming a route from Atlanta to Montgomery and Selma, also mentions several new industries in Alabama, including sawmills, a cotton-oil company, a fertilizer company and other plants.

The Western Alabama line is 133 miles long, and the financial statement of its report, covering the same fiscal year as the report of the other company, shows: Total operating revenues \$1,143,550, decrease \$51,596; operating expenses \$885,912, increase \$89,251; net operating revenues \$257,637, decrease \$140,848; total income \$286,397, decrease \$123,050; net income \$150,711, decrease \$3821; balance to credit of profit and loss, \$101,308.

All the line from West Point to Montgomery is laid with 80-pound rails, and the Selma division is nearly all laid with 70-pound rails. The company bought 25 box cars and 59 gondola cars. Material has been purchased for 60 new box cars, the erection of which has been deferred pending the completion of the company's new shops. Electric power has been installed in the machine shop, and the new planing mill is now in use, it also being operated by electricity.

New Equipment, Rails, Etc.

The Birmingham Southern Railroad is reported to have ordered from the Pressed Steel Car Co. 175 dump cars of 50 tons each and 26 gondola cars of 50 tons each. The road recently ordered two locomotives.

The Western Maryland Railroad, it is reported, has placed its order for 500 hopper-bottom cars with the Cambria Steel Co.

The Illinois Central Railroad is reported to have ordered 19 steel passenger cars from the Pullman Company.

The locomotive order of the St. Louis Southwestern Railway, given to the Baldwin Works, consists, it is reported, of 10 consolidation engines, 10 mogul freight engines, 6 Atlantic passenger engines and 5 mogul switching engines.

The Pennsylvania Railroad Co. is reported to have ordered 135,000 tons of heavy rails for delivery next year, with the option of increasing the order to 160,000 tons. About 30,000 tons of the order, it is expected, will go to the Maryland Steel Co. at Sparrows Point, Md.

The Morgantown & Dunkard Valley Railway Co. is reported to have ordered 550 tons of 70-pound rails from the Carnegie Steel Co.

Altus, Roswell & El Paso.

With reference to a press report that the Altus, Roswell & El Paso Railroad has been purchased by the Kansas City, Mexico & Orient Railway, President Ed. Kennedy writes from Altus to the MANUFACTURERS' RECORD:

"I have not made any contract with the Kansas City & Orient to purchase my road. I have offers from different trunk lines, but up to this time I have made no contract. I am going forward with my construction, and expect to be laying steel by the first of February on the first 50 miles. I have 40 miles graded from Altus to the State line of Texas, and also have a crew on the south plains of Mexico, with 55 teams at work, and they are progressing fast."

The American Railroad Co.

The American Railroad Co. has applied for a charter in Georgia to build a line about 60 miles long from Abbeville, Ga., northwest to Hawkinsville, and thence northwest and west to Grovania and Winchester, Ga. The authorized capital is from \$100,000 to \$1,000,000, and bonds may be issued not exceeding \$15,000 per mile. M. H. Boyer of Hawkinsville, who is one of the incorporators, filed the petition for charter. He is a lawyer. The other incorporators are George W. Bannerman, John E. Lang, S. N. Kriescher, David J. Gitto, John S. Duncan, E. Parry Bannerman, H. M. Bannerman and Geo. W. Flood of Nassau county, New York, and John A. Parry of Connecticut.

Whitmore to Marked Tree.

An officer of the Lansing Wheelbarrow Co., Lansing, Mich., informs the MANUFACTURERS' RECORD that the contract for building the Helena, Parkin & Northern Railway has been let to D. S. Watrous of Parkin, Ark. The railroad company, which was recently chartered, has authority to build from Whitmore, Ark., on the Choctaw, Oklahoma & Gulf division of the Rock Island system, via Parkin, Ark., on the Iron Mountain division of the Missouri Pacific system, to Marked Tree, Ark., on the St. Louis & San Francisco Railroad. It will be about 25 miles long, through a heavily-timbered country and very rich bottom lands.

Rock Island to Build Yards.

According to a report from Little Rock, Ark., the Chicago, Rock Island & Pacific Railway proposes to soon complete railroad yards at Hot Springs Junction, near Little Rock, according to plans made before the panic. This will require the building of about 15 miles of yard trackage. A roundhouse, a coal chute, water tanks and other buildings are to be erected at a cost of about \$150,000. Ultimately it is proposed to erect shops, but for the present the company will use the shops at Argenta.

It is said that the decision to again take up this work is prompted by the increase of business on the line.

An Extensive Scheme.

The Business Men's Club of San Antonio, Texas, is reported to have received a communication from J. M. Hamilton of Port Townsend, Wash., projecting a railroad from Puget Sound, on the Pacific Coast, to Aransas Pass, Texas, on the Gulf Coast. He names the projected line as the Puget Sound & Aransas Pass Railway, and proposes that it shall run from Tacoma, Wash., via Palisade, on the Union Pacific Railway in Nevada; Eureka, Nev.; Albuquerque, N. M.; Midland, Kerrville and San Antonio, Texas, to Aransas Pass. This would utilize the San Antonio & Aransas Pass Railway from Kerrville to the Gulf.

Electric Railway Sold.

Dispatches from Asheville, N. C., report the purchase by R. S. Howland of the property of the Asheville Rapid Transit Co., which was sold by order of the court for \$25,000. Mr. Howland represented himself and others interested in the property, which consists of an electric railway three miles long from the Asheville County Club to Newbridge, besides Overlook Park of 10 acres, right of way, rolling stock and equipment. The Weaverville Electric Co. is now completing an electric railway from Newbridge to Weaverville, N. C., and it is reported that the Rapid Transit property may be turned over to that company.

Glenray to Richwood.

A railroad enterprise which may be of considerable importance is that of the Glenray & Richwood Railroad Co., just chartered in West Virginia, with headquarters at Glenray, in Summers county, to build a line from Alderson, on the Chesapeake & Ohio Railway, northward to Richwood, W. Va., on the Baltimore & Ohio Railroad. This line would be about 40 miles long. The incorporators are F. M. Arnold, Harry E. Rugh, A. G. Corbett, A. J. Davis and Harry F. Stratton.

Lumber Railroad Extension.

The Tar River Lumber Co., Rocky Mount, N. C., advises the MANUFACTURERS' RECORD concerning a report that it would build a railroad extension, thus:

"We now operate about 10 miles of what we term main line logging railroad, and expect to extend it one or two miles during the coming year. We only extend this as we need it to handle our timber to the best advantage, switching out from time to time in order to get to our present holdings."

May Become a Common Carrier.

Concerning a press report that it would build a railroad out of Ruston, La., the United Lumber Co. of Quitman, La., informs the MANUFACTURERS' RECORD that it expects to move its mill to Ruston, and will build a road from there to Vernon, La., to be used as a logging line. It will be built of heavy steel on a direct route, with prospects of making it a standard line in the future. At first it will only be used as a private line.

Seaboard's New Loan.

The receivers of the Seaboard Air Line have been authorized by the United States Circuit Court at Richmond, Va., to issue \$4,250,000 of receiver's certificates, which will bear 5 per cent. interest. Negotiations have already been closed for their sale, and the proceeds are to be used to pay debts and also to make improvements and betterments.

Railroad Notes.

S. N. Liles of Jonesboro, N. C., is reported to have been granted a patent for ventilating railroad cars.

The Yazoo City Electric Railway of Yazoo City, Miss., is reported completed and turned over to the municipality, it being owned by the city.

D. R. Y. Boyd of Hattiesburg, Miss., is reported to have invented a metal railroad tie which has wooden cushions upon which the rails are to rest.

The Columbia & Pearl River Transportation Co. of Columbia, Miss., has been chartered with \$10,000 capital by N. H. Drummond, G. H. Rankin, W. E. Lamp-ton and others.

A dispatch from Sweetwater, Texas, announces that the first through train over the Kansas City, Mexico & Orient Railway has been operated from Wichita, Kans., to Sweetwater.

Charles B. Rodgers has been appointed general manager of the St. Louis, Brownsville & Mexico Railway, to take effect January 1, in place of J. N. Miller, resigned. Headquarters at Kingsville, Texas.

The Mississippi Electrical Association is reported organized by electric railway and light officials of various companies in that State. The officers are: President, A. B. Patterson of Meridian, Miss.; vice-president, S. W. Greenland of Columbus, Miss.; secretary and treasurer, J. Abbott of Jackson, Miss.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Scales and Telephone Systems.

Martin Lopez, San German, Porto Rico, writes the MANUFACTURERS' RECORD:

"Be kind enough to put me in touch with reliable American firms manufacturing or dealing in automatic scales suitable for use in butcher shops, of the kind that have two dials and deliver a slip which shows the date and weight without the use of any coin. These scales are desired principally for weighing from 1 to 25 pounds. I am also interested in securing some reliable inter-office telephone systems."

Autocars and American Novelties.

Gardeila Virginio, via S. Lorenzo 5 int. 20, Genoa, Italy, writes the MANUFACTURERS' RECORD:

"Put me in relation with merchants of your country who desire to have a commissioner for their business in Italy or for introducing new American novelties. If there is a company desiring to acquire autocars of Italian bankrupt manufacturers I can give prices for every type of car."

Wants Flake Graphite.

Karl Boschan, V., Alkotmany-utca 21, Budapest, Austria-Hungary, writes the MANUFACTURERS' RECORD:

"Send the paper to my American agent, Richard Weininger, 401 Fifth avenue, New York, and mention to him firms with whom he may put himself in direct communication for export of flake graphite."

Various Kinds of Oils.

Gustaf Lundberg, Stockholm, Sweden, writes the MANUFACTURERS' RECORD:

"I ask you the names of some first-class exporters of turpentine oil, cottonseed oil and corn oil. I should feel obliged to you if you will also make my name known to those who want an active agent here."

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

The West Point Mill Enterprises.

The stockholders of the Lanett Cotton Mills, West Point Manufacturing Co., Riverdale Cotton Mills, Lanett Bleachery and Dye Works and Chattahoochee Valley Railroad Co. held their annual meeting on December 12 in the offices of L. Lanier, president of the corporations, at West Point, Ga. The reports of the management were entirely satisfactory, and the usual dividend was declared. These companies operate approximately 150,000 spindles, with accompanying looms, consume about 100,000 bales of cotton annually, and have a weekly pay-roll of about \$17,000. Boston capital is largely interested.

The Rome Hosiery Mills.

The Rome Hosiery Mills of Rome, Ga., will erect modern buildings, to which its present plant will be removed. The new structures will include the mill proper, the dyehouse and the boiler-room, contract for which has been awarded to J. F. Dupree of Rome. They will be provided with the automatic sprinkler system. The company now operates 100 knitting machines and complementary equipment on the production of seamless hosiery, which it dyes and finishes. About 150 operatives are employed, and this force will be doubled in the new buildings.

The Scotland Neck Cotton Mill.

The Scotland Neck Cotton Mill of Scotland Neck, N. C., will increase capital stock from \$148,210 to \$250,000, and is reported as to expend the additional capital for erecting another building and installing machinery to double the present equipment. The company is now operating 100 knitting machines, dyeing, finishing and bleaching equipments, etc., driven by electric power, employing 200 operatives and producing underwear and hosiery.

The Thomaston Cotton Mills.

The Thomaston (Ga.) Cotton Mills will add 8000 spindles and accompanying machinery, as reported last week. This company has engaged O. H. Robbins of Charlotte, N. C., as engineer in charge to build the necessary addition and install the machinery. The Saco & Petee Machine Shops of Newton Upper Falls, Mass., will furnish the carding equipment, and the Fales & Jenks Machine Co. of Pawtucket, R. I., will supply the spinning frames.

The Thomaston Cotton Mills.

The Thomaston Cotton Mills of Thomaston, Ga., will add 5000 spindles and complement of looms, not 8000 spindles as mentioned last week. This company will build a 250-foot addition to its present building, and O. A. Robbins of Charlotte, N. C., is the architect in charge. Contract has been awarded for the new machinery. At present the company operates 15,000 spindles and 300 looms on the production of duck and sheeting.

The Kansas City Knitting Co.

The Kansas City Knitting Co. of Kansas City, Mo., has been organized and will install an equipment of machinery for knitting underwear. It has leased a portion of the building at 22d street and Rob-

ert Gillham road. Its officers are Samuel A. and Marshall S. Walker of the Star Knitting Co., Grand Rapids, Mich. They were mentioned by the MANUFACTURERS' RECORD in October as proposing this plant.

Betterments Costing \$10,000.

The Laurel Bluff Cotton Mill, J. L. Brown, proprietor, Mt. Airy, N. C., has about completed the installation of spindles and accompanying equipment to replace 2400 old spindles. The Mason Machine Works of Taunton, Mass., furnished the spinning machinery, and the Draper Company of Hopedale, Mass., supplied the spoolers. About \$10,000 is the cost of the improvements.

The Capps Cotton Mills.

The Toccoa (Ga.) Cotton Mill has leased and is now operating the Capps Cotton Mills. This plant's capacity has been doubled, and 4000 spindles are now in operation, the product being hosiery yarns.

Textile Notes.

The Bonham (Texas) Cotton Mills will expend \$30,000 for additional machinery.

W. W. Glenn of Gastonia, N. C., is reported as organizing a company to build a cotton mill at Waynesville, N. C.

It is rumored that the Cuero (Texas) Cotton Mills will double capacity. The company now operates 5000 spindles and 160 looms.

Geo. W. Watts of Durham, N. C., will organize a new company to operate the Odell Mills at Concord, N. C.; referred to last week.

The Stonewall (Miss.) Cotton Mills have completed the installation of Northrop looms in place of 164 old looms. The new looms were furnished by the Draper Company of Hopedale, Mass.

J. P. McRae of Laurinburg, N. C., is reported as organizing a company to build a cotton-yarn mill equipped with 15,000 spindles. He is president of the Dickson Cotton Mill and the Scotland Mill, which operate about 25,000 ring spindles, producing hosiery yarn and employing about 525 persons.

For Virginia Waterways.

An outcome of the meeting last week at Washington of the National Rivers and Harbors Congress was the organization of the Virginia Harbors and Waterways Association, with Messrs. R. A. Dobie of Norfolk, president; George Lindsey of Portsmouth, secretary-treasurer, and Geo. W. Glenn of Saxis, Accomac county; T. J. Tool of Portsmouth, George Bryan of Richmond, Charles Hall Davis of Petersburg, Rorer A. James of Danville, H. C. Featherstone of Lynchburg; N. B. Early of Amherst, James E. Clements of Alexandria county, R. Tate Irvine of Big Stone Gap, Dr. H. Donald Scott of Amherst, vice-presidents, and Harvey M. Dickson of Norfolk, B. L. Bugg of Norfolk, William T. Anderson of Norfolk, W. E. Barrett of Newport News, J. Davis Reed of Portsmouth, H. W. Rountree of Richmond, E. D. Starke of Richmond, N. C. Manson of Lynchburg, E. B. Jacobs of Roanoke, Alexander J. Wedderburn of Fairfax, executive committee.

Canada Iron and Steel.

The American Iron and Steel Association, Mr. James M. Swank, general manager, No. 261 South 4th street, Philadelphia, has published the Canadian supplement to the Directory to the Iron and Steel Works of the United States. This contains a complete list, corrected to December 1, 1908, of the blast furnaces, rolling mills and the steel works in Canada.

MINING

Louisiana's Mineral Wealth.

The South's great wealth in its petroleum and gas is very strongly emphasized in an article by Dr. Leo Ubbelohde, chairman of the International Committee for the Unification of the Methods of Testing Petroleum of Germany, in the New York *Oil, Paint and Drug Reporter*. Dr. Ubbelohde, who has lately made a study of the oil resources of this country in connection with Dr. David T. Day of the United States Geological Survey, in his article says:

"I was particularly impressed with the wonderful resources of Southern Louisiana not only in regard to petroleum, but also in regard to the enormous wealth evident there in sulphur, salt and natural gas."

Referring to a visit to Belle Isle, in the extreme southern part of Louisiana, he says:

"At this celebrated locality salt has been mined for many years, and recent investigations by the deep wells sunk there show the existence of salt to the phenomenally great depth of 2600 feet, and sulphur has already been found there. The oil from this region is the most remarkable that I have seen in the United States. . . . The wonderful indications of natural gas in the southeast of Belle Isle struck me as presaging an enormous supply of this material for industrial purposes in the next few years; and taking this, together with the supplies of salt, sulphur and petroleum, make it evident that Southern Louisiana must of necessity become the seat of chemical industries comparable with Glasgow, Solvay and the other celebrated chemical centers of the world; provided, of course, that the proper manufacturing spirit is developed in the community."

Referring to his visit to the Caddo oil field, and to the fact that 70,000,000 cubic feet of natural gas are going to waste there every day, he says:

"Surely this is the most aggravated case of American advertising that can be conceived, for all the good that comes from this enormous waste, sufficient to supply 10 cities the size of my own city of Karlsruhe, Germany, or of Washington, D. C., is to attract the attention of a few passers-by on the trains. . . . I learned that some of this natural gas is piped to Shreveport and northward to Texarkana, but it is a problem too deep for one unaccustomed to the United States to solve as to why in Pennsylvania the natural-gas distributors should go to great pains to collect natural gas, even by the enormous suction pumps, draining the last cubic foot of natural gas from Pennsylvania and West Virginia wells and pumping the product more than 200 miles to Cleveland, and yet allow New Orleans, a better market for fuel, to go without the gas, which would flow by its own pressure much further, and which is now being wantonly wasted in the same State."

Continuing his discussion of this subject, Dr. Ubbelohde says:

"The waste so greatly in evidence in Caddo is offset by the wonderful thrift of the oil producers of Oklahoma, or rather the thrift of the pipe-line companies who collect the oil. No one can see the farms of thousands of monster oil tanks in the Glenn pool at Muskogee, and in the shallow sand territory, without marveling at the engineering skill and at the alertness of the pipe-line companies in taking care of this enormous production with such wonderful rapidity. In Germany we all know the troubles involved in even securing promptly from the steel works the necessary material for the construction of such tanks, and the capacity for this in the United States is strikingly illustrated

in Oklahoma. Again, we know the difficulty of manufacturing such large tanks, of securing the men equipped with the necessary precision to build these tanks with sufficient care to prevent leakage. In these matters the efficiency of the United States is evident, but, above all, it is evident that here in the United States the supply of oil exceeds all the promises of the rest of the world, and yet your rate of consumption, as shown by the figures of the United States Geological Survey, must make the oil refiner look with care to still other fields in which the United States will probably be found rich."

Barytes in Kentucky.

[Special Cor. Manufacturers' Record.]
Lexington, Ky., December 12.

There are efforts being made to organize a company for the purpose of establishing a barytes plant in Lexington. There is now a ground barytes plant at Nicholasville, in a neighboring county, and a chemical plant in Scott county. I think the idea of the promoters of the Lexington proposition is to erect a combination plant at Lexington, and thus have the benefit of a central location for obtaining ores from Fayette and surrounding counties. This region is rich in barytes veins of high quality, veins of the mineral occurring in Anderson, Bourbon, Clark, Fayette, Franklin, Garrard, Harrison, Henry, Jessamine, Mercer, Owen, Scott and Woodford counties. F. J. Fols of the State Geological Survey has now in hand the study and mapping of the deposits. With less than half of Fayette county alone investigated, 25 veins have been noted, some of which have been traced for more than three miles, and nearly all of which have been prospected to some extent. Many veins are also known in the other counties, and some of them are being worked. The veins are known to extend down to a depth of 250 to 275 feet; in other words, from the top to the base of the Lexington formation (Trenton), and the width will average three feet. The barytes is exceptionally free from silica and iron.

C. J. NORWOOD,
State Geologist.

Plant for Mica Products.

Authentic information has been received by the MANUFACTURERS' RECORD regarding the plans and proposed operations of the Great Southern Mica Co., 227-235 Williamson Building, Cleveland, Ohio, which is erecting a plant at Asheville, N. C. The company is installing this plant for the purpose of consolidating the work of its three plants, which are located at Heflin, Ala.; Sylvia, N. C., and Spruce Pine, N. C. A building 62x120 feet is under construction, to cost approximately \$11,000, and it is expected to have sufficient machinery installed to begin operations in one or two departments by January 1, 1909. The products of the plant will consist of punch mica of all kinds, including discs and washers of odd shapes and sizes, wet and dry mica, stove and electrical mica, etc. Construction work is in charge of Harold F. Seymour, assistant general manager of the company, Asheville, who will also superintend the operation of the plant. Other officers are J. J. Sullivan, president; Judge Carlos M. Stone, vice-president, and Hubert H. Ward, secretary-treasurer.

An Alabama Development.

Mr. C. E. Everett of 140 Dearborn street, Chicago, who was recently reported as having purchased coal land in Alabama, advises the MANUFACTURERS' RECORD that details for the development of the property have not been fully determined, but a mine will probably be equipped for the production of 1000 tons of coal daily, the ca-

capacity to be doubled later. To facilitate operations it will be necessary to construct about two miles of railroad from the main line, and also a cableway for conveying the coal from the mine to the tipple. The elevation of the property is about 900 feet above sea level.

Mining Notes.

November loading in the New River field amounted to 490,220 tons of coal and 528 cars of coke, and in the Kanawha field to 517,000 tons of coal.

The Southern Coal & Transportation Co. of Robard, Ky., has incorporated with a capital stock of \$500,000. Its incorporators include John W. Miller, George C. Ross and G. H. Kunst, all of Grafton, W. Va., and associates.

The Piedmont Spar Co., Inc., of Bedford City, Va., has incorporated with a capital stock of \$60,000 for the purpose of developing iron and other mineral deposits. Its officers include C. L. Boyer, Circleville, Ohio, president, and Landon Lowrey, Bedford City, vice-president.

The Kenova Coal Mining Co. of Huntington, W. Va., has incorporated with a capital stock of \$50,000. Its incorporators include P. H. Grelle, Hartford, W. Va.; C. J. Warmack and A. C. Blowers, both of Pineville, Ky.; Henry Holverschild and Harry W. Barker, both of Chicago.

COTTONSEED

For Cottonseed and Other Products.

The MANUFACTURERS' RECORD has received authentic information regarding the plans of the Columbia Cotton Oil and Provision Corporation of Washington, D. C., which was recently incorporated with an authorized capital stock of \$300,000. The principal purpose of the company is to refine cottonseed oil, and to facilitate its operations it has acquired the property of the Washington & Virginia Stockyards & Abattoir Co. near Rosslyn, Va., including 10 acres of ground. Contracts have been awarded for the construction and equipment of its plant, which has been designed especially to meet the particular requirements of the company. The building will be 105.3x57.3 feet, five stories and basement, with skeleton frame of reinforced concrete. It will be surrounded on all sides with reinforced concrete platforms and connected by tunnel with another building of similar size and construction, which will be used as an abattoir, except a small portion to be occupied as a machinery room. The entire basement of the latter building will be insulated and refrigerated as a curing cellar. Freight and passenger elevators have been provided, as well as iron stairways, all well lighted and ventilated. The plant will be lighted with electricity, and the motive power furnished by motors individually and directly connected. The refining plant will have a capacity of 1000 barrels of cottonseed oil daily, and will manufacture food products and soaps, making a specialty of butter oils, salad oils, cooking oils, lard compounds, etc. The abattoir will have a capacity of 15,000 hogs, 600 cattle and 2500 sheep per week, with facilities for making sausages, dried and fresh meats, canned meats, meat extracts, mincemeat, etc. Plans for the structures were prepared by Clarence A. Coburn, consulting and contracting engineer, Metropolitan Bank Building, Washington, who will supervise the construction and installation of the plant. Officers of the company are George P. Sacks, president; R. N. Harper, vice-president; W. V. Cox, second vice-president; W. G. Carter, secretary; Thomas Grant, treasurer, and E. N. Brown, general manager.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Alabama-West Florida Lumbermen.

The regular monthly meeting of the Alabama-West Florida Lumber Association was held at Mobile last week, with President J. B. Burlingame presiding. The transportation committee made a report regarding rates on shipments of lumber, and Secretary J. H. Eddy, as chairman of a committee to which the subject had been submitted, made a report on the question of insurance. Chairman Snell of the membership committee advocated personal solicitation of new members, believing the association will be able to largely increase its membership after the first of the coming year. A motion was adopted directing the secretary to get an expression from each member of the association relative to any changes desired in the classification. The opinion prevailed that the lumber industry has been better for several weeks past, and that the outlook is good.

For Southern Cypress Manufacturers.

The Central Iron Works of Quincy, Ill., wants addresses of Southern manufacturers prepared to furnish one-inch select cypress.

Wants Box Shooks.

The Bedford Can Co., Bedford City, Va., will be in the market for about 50 cars of box shooks for tomato cases.

Lumber Notes.

The builders of Houston, Texas, have organized a temporary association with W. E. Woodruff, president; H. L. Weinberg, secretary, and E. E. Hotcamp, treasurer.

Messrs. W. S. Haines and E. H. Tannehill, who operate a sawmill near Chidester, Ark., are reported to have secured a contract for sawing 4,000,000 feet of lumber for the Lester Mill Co.

The German steamer Marie Menzell cleared from Pascagoula, Miss., last week with a cargo of 1,628,000 superficial feet of lumber for Bahia Blanca. The shipment was made by the L. N. Dantzer Lumber Co.

Architects of Houston, Texas, have organized a chapter of the Architects and Structural Engineers, with the following officers: H. C. Cooke, president; F. S. Glover, first vice-president; L. S. Green, second vice-president; Charles P. Jones, secretary, and Oile J. Lorehn, treasurer.

Fertilizer Mixers Organize.

Representatives of Georgia fertilizer mixing companies met at Macon last week and organized the Fertilizer Mixers of Georgia, with the following officers: Isaac Schoen, Atlanta, president; T. N. Smith, Tennille, vice-president; A. B. Strobar, Savannah, secretary, and J. T. Tittard, Winterville, treasurer. The membership of the organization, it is said, is composed of companies which purchase fertilizers in bulk and mix them into various brands.

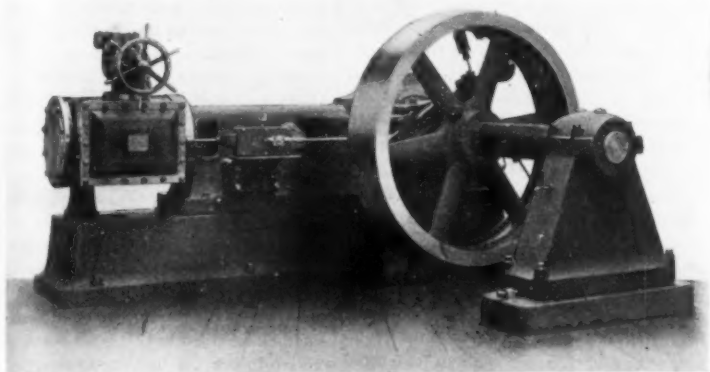
West Virginia Highways.

In order to arouse public sentiment in the State to the necessity of improving its highways, the West Virginia State Board of Agriculture has published a report presenting the subject in its various aspects. The volume, which is well illustrated, contains many articles prepared by practical men of the State and elsewhere, and should be influential in equipping West Virginia with first-class roads.

MECHANICAL

The New Ridgway Engine.

People interested in new steam engines will find their attention attracted to the two accompanying views of the new Ridgway engine and its flywheel and governor. This type is of the line of side-crank engines now built by the Ridgway Dynamo & Engine Co., Ridgway, Pa. Like the center-crank type, which the company has



NEW RIDGWAY SIDE-CRANK ENGINE.

built heretofore, the new engine has been designed for simplicity, strength and quality, rather than for cheapness. All parts are made to gauge, and wherever possible are interchangeable. Each completed engine is tested for from 10 to 24 hours under full and overload conditions.

The bed is of heavy design; main part is of box section, and has large bored guides; guides and end for cylinder are bored and turned at one setting on a special machine, insuring perfect alignment; nuts on studs holding cylinder are placed outside in recesses in end of bed, and are covered by a polished steel band; cylinder end of bed is a removable partition provided with sectional packing around piston rod to prevent oil from being thrown against end of cylinder; between cylinder and partition is a well, in which drip from stuffing-box is caught; water is removed by a separator, and oil flows back to crank pit; ample openings are provided for packing piston-rod stuffing-box and other openings, closed by light cast-iron doors, give easy access to crosshead and pin. The crank disk is covered with an oiltight guard of light sheet steel, hinged at top, so that it may be turned back over bed, giving access to connecting rod and crankpin; small opening in side of guard has a swinging cover, allowing inspecting crankpin while engine is in motion.

The main bearing on all sizes is of quarter-box type, with babbitt-lined shells; horizontal adjustment is secured by a wedge and vertical adjustment by drawing down cap; top and bottom shells are interchangeable, and all shells may be quickly and easily removed without taking shaft out of bed; connecting rod is an open-hearth steel forging; straps at both ends are slotted from solid forgings; wristpin box is of solid phosphor-bronze, and crankpin box is lined with babbitt; both ends are adjusted by wedge-and-bolt method.

The crosshead body is cast steel, and shoes are cast iron, faced with babbitt; upper shoe is bolted solidly to body, and lower one is adjustable; four hollow bolts pass through crosshead body, inside of which are cap bolts, which hold shoe firmly; both top and bottom shoes can be adjusted by use of shims. The wristpin is 0.5 per cent. carbon steel, tapered to fit seats in each side of crosshead body, and provided with keys, so that it may be turned 90 degrees as it wears.

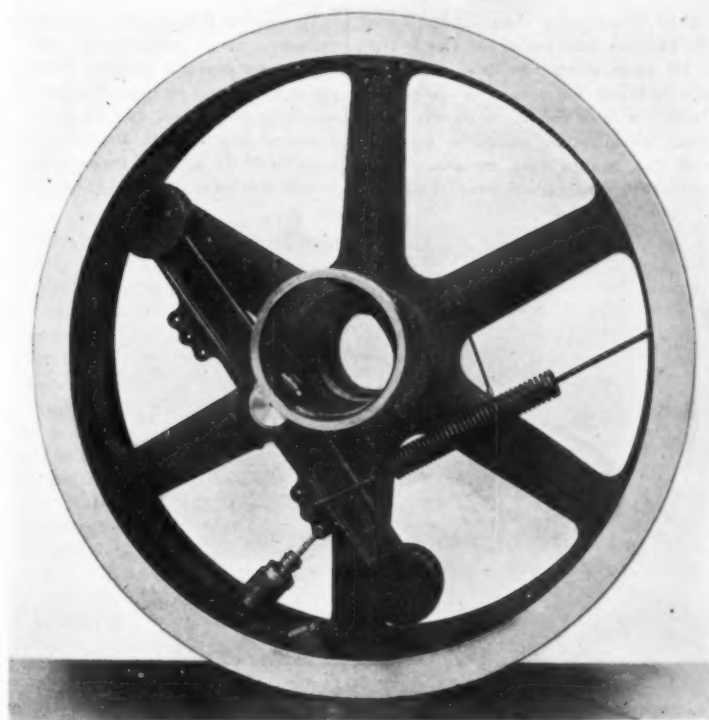
The main shaft is a single open-hearth

steel forging, extra large in bearings and governor wheel hub; crank disk is a semi-steel casting, very tough, close-grained and hard. Because of large size of crankpin and shaft at the crank fit, the crankpin is cast solid with disk. After pin is turned and shaft fit bored the crank is forced on shaft under hydraulic pressure and secured by a heavy key.

The outboard bearing pedestal is heavy and broad at base to insure stiffness; bearing is self-oiling and self-aligning, and has

babbitt-lined shells; vertical adjustment is accomplished by a special device applied to four holding-down bolts at base of pedestal; horizontal adjustment is made by ordinary set screws in lugs on pedestal sub-base.

Cylinder and valve are same as those used on the company's center-crank engines; piston is a single hollow casting, strong but light, and has cast-iron snap rings of a special design, which effectually prevent leakage without appreciable wear on cylin-



RIDGWAY ENGINE FLYWHEEL AND GOVERNOR.

der walls; piston rod is large, and of machinery steel; rod and piston are joined by a force taper fit, supplemented by a jamb nut; rod screws into crosshead with a long, fine thread, and is prevented from turning by a jamb nut; this jamb nut is further held by a set screw in crosshead body.

A most important part is the governor, perfect regulation being essential, especially in engines for driving electrical machinery. The Ridgway governor was formerly known as the Begtrup, and is of the

inertia type. A long bar, called inertia bar, having weights at each end, is pivoted at center on a roller bearing; main pin is large and heavy and of steel, hardened and ground; inertia bar is lined with hardened steel bushings, and space between pin and bushings is filled with hardened steel rollers; this insures a minimum of friction, and bearing is subject to little wear. This is the only bearing requiring lubrication, although it will go without attention for several weeks. To hub of this bearing is clamped the eccentric, which is keyed in place and is also held by set screws. The eccentric and eccentric strap, being split, are removable without disturbing governor or setting of valve; a heavy coil spring is secured to middle of one end of bar; opposite spring is an oil dash pot, consisting of a cylinder with a loose-fitting piston and a connecting rod bolted to inertia bar; a by-pass with an adjustable opening allows oil to circulate from one side of piston to other; governor is perfectly reversible without use of any extra parts.

The valve gear is simple and strong; ram slide has a long bearing, and is provided with horizontal and vertical adjustments; all pins and rods are of machinery steel; eccentric strap is lined with babbitt, and bearing at slide is lined with a replaceable bronze bushing having a screw adjustment.

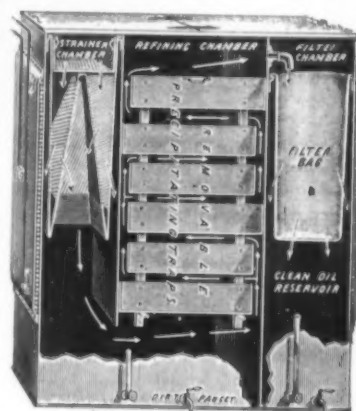
Two standard methods of lubricating are provided. In splash system crank pit is filled with oil, which disk throws over crosshead and guides. Oil from upper guide is wiped off by top crosshead shoe, and flows through passages and pipes to crosshead pin. Pockets on inside of crank guard collect oil, which is led through passages to main bearing and to crankpin; all bearings are, therefore, practically flooded at all times. The second system

enclosed, no oil can be thrown on floor or into governor wheel; with either system valve gear is supplied with grease cups.

This Ridgway engine is built in simple, tandem and cross-compound types. In the compound types the low-pressure valve is of the balanced type. On tandem engines both valves are driven by the governor, the low pressure directly and the high pressure by a tail rod on the low-pressure valve. On cross-compound engines the high-pressure valve is driven by the governor, and the low pressure by a fixed eccentric on the main shaft; otherwise, the valve gear is identical for each cylinder. Simple and tandem compound engines from 50 to 800 horse-power and cross-compound up to 1500 horse-power can be furnished.

Franklin Oil Filters.

One of the necessities in manufacturing is lubrication. This very usually is oil, and it is not uncommon to have a half-barrel or can or even a hole in the ground where the used oil discharges and drain or is pumped to the sewer. Then someone discovered that this used oil could be utilized again as a lubricant if some way could be found of freeing it from parti-



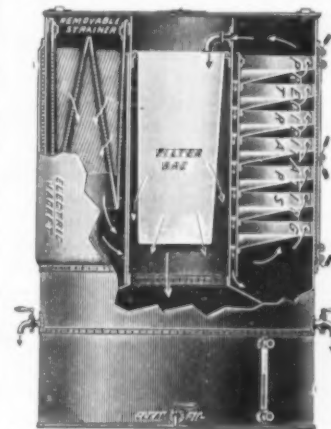
FRANKLIN OIL FILTER; MODEL A.

cles of dirt and grit. The next step was the production of oil filters and cleaners.

One of the foremost makers of oil filters is the Franklin Oil Filter Co., 308 North Commercial street, St. Louis. The company has been manufacturing oil filters for 12 years.

The Franklin, Model A, and the Famous, Model D, are illustrated herewith. They embody a similar principle of a settling trap system of pans and strainers.

The dirty or used oil is poured in by



FRANKLIN OIL FILTER; MODEL D.

hand or piped in by the Franklin system to the strainer chamber, from which it flows down through the strainer chamber, which catches all the coarser particles, grit and dirt. It then flows down underneath the deflecting walls, and must flow back and forth over the precipitating traps to rise to the top, from whence it overflows into the filter bag, then to the clean oil chamber, where it can be drawn off at will.

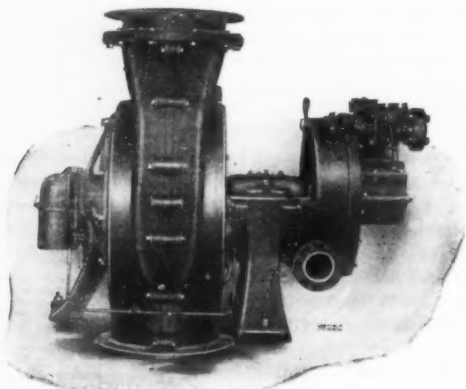
The filter is equipped with dirt oil fau-

set to draw the dirty and mushy oil as it accumulates, and with automatic water discharges, which can be regulated so that the water that accumulates in the oil will discharge when it reaches a certain height in the filter.

The filter is so arranged that the strainer traps or bag can be removed independently and cleaned without interrupting the clean oil reservoir.

The filters are equipped with a jacket surrounding the refining chamber, which furnishes the proper temperature for purifying the oil, thus positively releasing and depositing all the suspended and semi-suspended impurities into the precipitating traps. These jackets are of two kinds;

opening at the circumference. In appearance and in operation it is similar to the well-known centrifugal pump, the efficiency depending largely upon design of impeller and casing and on proper shaping of these parts. These machines are of sturdy construction and will operate under adverse conditions with low cost for maintenance. A successful compressor of this type necessitated a thoroughly reliable high speed driver. For this purpose standard turbines have been used in many cases and standard turbo-generators have been utilized as direct current motor drivers with but slight change. Compressors driven by induction motors are also available. Two accompanying views illustrate



NEW CENTRIFUGAL AIR COMPRESSORS.

one an electric, operated by current taken through an ordinary lamp cord, and the other a steam jacket, operated with live or exhaust steam, exhaust from a gas engine or hot water.

The steam jacket is equipped with exhaust water trap, which is always locked with about five inches of water, preventing the escape of steam. Two full-length gauge glasses properly set to indicate the exact condition of the water and oil in each chamber makes it clear to the operator at all times just how much oil he has. By supplying the heat midway from the bottom of the filter gives the impurities a chance to precipitate and settle, being quite an advantage over their old style of applying the heat from the bottom, which constantly agitates the impurities through the clean oil.

The Franklin filter is in use in 67 departments of the United States Government, and large systems have been installed by the Niagara Power Co., Niagara Falls; United Railway, St. Louis, and Boston Elevated Railway, Boston. Nearly 7000 Franklin filters are in use.

The largest filter plant in the world was equipped and installed by the company at the St. Louis World's Fair. It was selected by a board composed of 12 engineers to care for the entire oil used in the moving machinery in the machinery hall. The company is now constructing two 100-gallon steam-jacket famous filters for South Africa, this being the sixteenth order shipped to the agent in that country.

New Centrifugal Air Compressors.

Owing to the great demand for moderate pressure air compressors for industrial air blast and exhaust service the General Electric Co., Schenectady, N. Y., has carried out during recent years a series of exhaustive experiments on the centrifugal type and is now prepared to furnish a line of standard centrifugal air compressors with pressures rated from .88 pounds to 4 pounds per square inch, and in capacities from 750 to 10,000 cubic feet of free air per minute.

The centrifugal air compressor consists essentially of a rotating impeller surrounded by a suitable casing with an intake opening at the center and a discharge

the representative types of turbine and motor-driven compressors.

These motors are of construction similar to the generators used in turbo-generator sets. Commutating poles and shrunk-ring commutators are used so that sparkless commutation is insured. Each direct current motor is furnished with a suitable rheostat, so that adjustment of pressure can be obtained by changing the speed. The turbines used are of the Curtis type, in all cases similar to those now being manufactured for use with generators. Under the same conditions of service the steam consumption compares favorably with the reciprocating engines. Slight speed variations can be readily made so

pressor from becoming loaded during the starting period. It also cuts off the discharge main from the opening through the compressor shell to the atmosphere when the set is not in use.

As in the case of centrifugal pumps, the pressure depends on the peripheral velocity or rim speed of the impeller. Increased pressure can be obtained by increasing the speed. The volume of free air is, however, limited by the capacity of the driver and hence must be reduced proportionately to the increase in pressure, otherwise the driver might become overloaded.

The pressure in the mains leading from the compressor is entirely free from pulsation and practically constant for all volumes within the rated capacity of the compressor. Contrary to the results obtainable with positive pressure blowers, the power required to drive centrifugal compressors varies approximately with the volume of air delivered when operating at a constant speed. This fact gives a greater flexibility and improved economy to the centrifugal type where variable loads are required, satisfactory efficiency being obtained between the limits of 25 per cent. and 125 per cent. of the rated load.

For foundry cupola service the direct current motors can be compound wound so as to automatically increase the speed should the volume of air delivered decrease, thus increasing the pressure of the air and preventing undue reduction of flow of air through the cupola when it chokes up. Further adjustments of pressure can be made by changing the speed of the motor by means of the field rheostat. Similar results are obtained for the turbine-driven sets by means of a compensating governor. This feature is not required in all foundries, though it is considered essential in some.

Since the pressure developed is practically constant from no load to 25 per cent. overload, these compressors are well adapted for constant pressure work, as in gas or oil furnace service. For this service one large compressor may be installed in a central location with distribution mains running to the different furnaces, such an installation being preferred to one in which

efficiency decreases very rapidly. Then, too, the cost of buildings and foundations is a large item when installing a reciprocating engine unit, because by its design the blowing engine necessarily requires considerable floor space.

The centrifugal compressor has distinct advantages over other types. As already illustrated and described, these compressors are exceedingly simple in design and efficient throughout the working range. The only wearing parts are the bearings; hence nothing can get out of order. Furthermore, neither gearing nor belting is required, as would be the case with separate drivers. There is also a great advantage where a variable volume is required at constant pressure, as this is a characteristic which is inherent in a centrifugal compressor without change of speed or appreciable loss in efficiency. In the displacement type of compressor at constant speed, however, the pressure drops rapidly with the output above a certain point, and the volume is limited by the size of the cylinder and the speed. As regards compactness, at least three of these centrifugal compressor sets could be installed in the space required for one reciprocating blowing engine.

It follows, therefore, that a loss of power and efficiency for fractional volumes results with displacement machines, and that it is impossible to maintain pressure on overloads. It would also require an exceedingly complicated governing mechanism and a special form of driver in order to automatically obtain speed variations which would produce results at all comparable with the centrifugal type. The floor space occupied is considerably less for the centrifugal type of compressor. Displacement machines also require a large storage tank in cases where a fluctuation of pressure due to the periodic discharge is objectionable, but the uniform pressure that is obtained from a centrifugal machine eliminates all necessity for this cumbersome and expensive arrangement.

For use in smelters these compressors are admirably adapted. They can also be used to advantage in sulphite pulp mills and in connection with chemical works, where a small degree of vacuum is required.

Refrigeration in a Steel Plant.

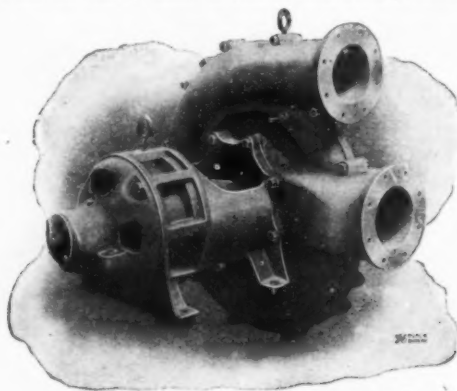
By the Gayley process the air required for combustion in blast furnaces and the Bessemer process is deprived of the greater portion of its moisture by cooling it far below its dew point. Its humidity is thereby rendered normal under any climatic or atmospheric conditions. The vapors thus eliminated by condensation collect on the surface of closely packed groups of piping, along which the air is sweeping, and which are kept at low temperature by circulating through them a refrigerated solution of chloride of calcium.

Fig. 1 is a view of the engine-room and four 300-ton refrigerating machines. Fig. 2 is a view of the double-pipe brine coolers.

The arrangement of the cooling compartments, or chambers, and the manner in which the pipe groups are mounted therein are described in the following reference to an installation recently completed at the South Works of the Illinois Steel Co., South Chicago, Ill. Three views in the plant are presented herewith.

The refrigeration of the circulating fluid is accomplished by machinery furnished and erected by the Vilter Manufacturing Co., Milwaukee, Wis. The entire plant is installed in structures especially provided.

The main building, 102 feet long and 53 feet wide, accommodates on its first floor, which is 40 feet high, four refrigerating machines of 300 tons refrigerating capacity each. They are of the duplex horizontal type, each machine consisting of a cross



NEW CENTRIFUGAL AIR COMPRESSORS.

that changes in pressure are for non-condensing operation and sets above 50 horse-power can be furnished. Turbine-driven sets can be furnished to operate condensing, if desired. These turbines are adapted for steam pressures from 100 pounds to 175 pounds. The induction motors are furnished with the well-known squirrel cage type of rotor. Since the speed of this type of motor cannot be varied, care must be taken to specify a pressure sufficiently high to cover the operating requirements, because at constant speed the pressure cannot be varied without altering the design of the impeller.

All compressors should be furnished with a blast gate located in the discharge main. This gate consists of a simple butterfly valve which prevents the com-

a number of small blowers are located in various places. For ordinary gas or oil furnaces the rated pressure of 1.7 pounds should be sufficient, although for furnaces requiring a concentrated or positively directed jet, 2.7 pounds rated pressure may be desirable.

For blast-furnace service this type of compressor bids fair to supplant the reciprocating blowing engine. Any type of reciprocating engine is more or less delicate, and requires almost constant attention and care, which results in a very large expense for maintenance each year. It has been proved beyond a doubt that to keep the blowing engine at its most efficient operating point it is necessary to overload and clean it at least once a year. If this is not done, as is usually the case, the effi-

compound condensing Corliss engine and two ammonia compressors placed opposite the high and low pressure steam cylinders, and connected to the crank disks on the ends of the common shaft. The size of the steam cylinders is 24x46 inches, by 36-inch stroke, while the ammonia compressors are of 18 inches in diameter and 36-inch stroke.

The ammonia compressors are provided with a set of two suction and two discharge valves placed in each cylinder head

While the installation in its various parts barely presents any features which could not also be found in other modern applications of refrigerating machinery, it is the method in which the liquefied ammonia is handled and uniformly distributed to the great extent of the cooling apparatus which deserves special mention.

In usual refrigerating practice this is accomplished by needle valves or expansion cocks attached to the supply side of each stand of the cooling apparatus, and

pipes passing through them. Here it is subjected to the effect of the heat transmitted through the walls of the 2-inch pipes by the circulating chloride of calcium solution (the fire and combustion gases of the boiler furnace) and converted into gas (steam). The gas and entrained liquid ascend and reach another large pipe header (the front water leg of the boiler) connecting all the outlet ends of the double pipe coolers, through which they enter the accumulator (steam drum of the boiler).

In this drum the separation of gas and entrained liquid takes place, the gas passing out on top through the main suction line to the compressor for reliquefaction, the liquid returning from the lower end of the accumulator to the double pipe coolers for renewed circuit.

It is evident that, through the adoption of this method of introducing the liquid refrigerant into the evaporating apparatus, only one supply valve is needed for each battery of 20 coolers or for all four batteries if it were not for the demanded division into four separate units in this case—in the same manner as a great many boilers may be supplied by one boiler feed pump. It is also evident that through this flow by gravity through a communicating pipe the liquid refrigerant is distributed to all coolers alike in such quantities as will not only suit the varying conditions of temperature of the circulating and heat transmitting fluid, but also insure the full use of the total evaporating surface of each cooler.

To make the cooling process continuous, the ammonia gas generated in the coolers is returned to the accumulator after being reliquefied by means of compression and subsequent condensation. In doing so, however, one important feature upon which hinges the success of the entire procedure has to be observed. The process of liquefaction must necessarily be performed at the temperature of the cooling water which is available for the ammonia condensers. The liquefied ammonia returning from the condensers to the accumulator is therefore of much higher temperature and under much greater pressure than are

of this portion of the fluid, but also a disintegration of the compact flow of the liquid in the same manner as if water is blown from the test cocks of the water column of a boiler under high steam pressure or as it emanates from the blow-off pipe. This spray of liquid would be carried along with the current of gas flowing from the accumulator to the compressors, and, becoming unavailable for evaporation in the coolers, constitute a much greater loss in efficiency than the one alluded to heretofore.

To prevent this loss it is necessary to deprive the liquid refrigerant of its excess of sensible heat before it is relieved of its high pressure and admitted into the accumulator. This is accomplished by the use of a long spiral coil suspended in the upper part of the accumulator and exposed to the current of the cold gas flowing to the compressors through which the liquefied ammonia passes before it reaches the relief valve which supplies each battery of coolers.

The machinery installation was commenced the middle of March this year, and was completed May 5. It proved successful from the beginning and has been operated throughout the summer, exceeding in its performance the guarantees of the builder in contract with the Illinois Steel Co.

Wants Truck Farmers.

E. F. Young, president Metta Coal Co., Johnson City, Tenn., writes to the MANUFACTURERS' RECORD:

"Can you put us in touch with parties that can supply us with truck farmers on small acreage. We have several hundred acres first-class soil cut up into five-acre tracts for truck farming. We have the market right at our door for all that can be raised; in addition, we have 100 coal operators in a radius of 80 miles of Johnson City, which makes high prices for truckers located here."

The Southern Turpentine Co.

The Southern Turpentine Co. has been incorporated with a capital stock of \$1,-

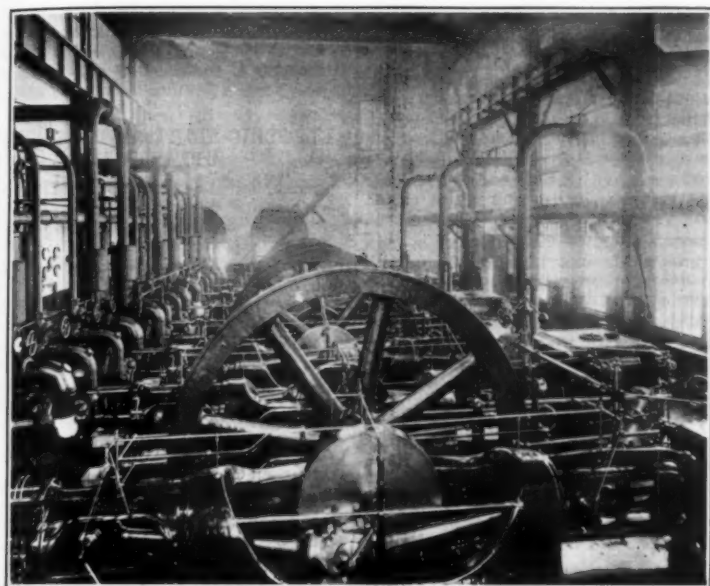


FIG. 1.—REFRIGERATION IN A STEEL PLANT.

and readily accessible. The gas discharged from the compressors passes through oil traps, of which one is provided for each machine, and enters the condensers, which are placed on the second floor of the main building. These condensers are of the double-pipe type, consisting of 2-inch pipes 18 feet long, with 1 1/4-inch pipes passing through them for circulation of the cooling of condensing water.

Twenty-five stands of such double pipe condensers, grouped 12 pipes high, are provided for each machine, making in all 100 stands. While the division into four separate units is strictly maintained throughout for obvious reasons, yet connections and valves are arranged in such a manner as to permit the operation of either two machines or all of them in combination on all or part of the ammonia condenser system.

The liquefied gas is collected in four receivers located near the oil traps and carried through individual pipes to the cooling apparatus, in which the liquid ammonia is evaporated by means of the heat transmitted to it from the circulating fluid employed for the refrigeration of the vast volume of air supply.

The cooling apparatus is installed in a building 68 feet 4 inches long, 58 feet 8 inches wide and 25 feet in height, which adjoins the engine room. The floor, walls and ceiling of this room are well insulated with a double lining of cork board two inches thick. The coolers are of the double pipe type and set in four batteries of 20 stands each. Each stand consists of 12 3-inch pipes, connected in circuit, and 2-inch pipes passing through them. A saturated solution of chloride of calcium, used as a circulating medium, is forced through the inner pipes and transmits its heat to the liquid ammonia contained in the annular spaces formed by the outer 3-inch pipes. By abstracting the heat from the circulating fluid, the liquid ammonia—the boiling point of which at the working pressure employed in the apparatus lies between 5 and 10 degrees Fahr.—is converted into steam or gas, which returns to the ammonia compressors to undergo again the process of liquefaction.

by which it is attempted to regulate the supply of the liquid refrigerant as it comes from the ammonia condensers so accurately that each stand receives its requisite amount of ammonia; that is to say, no more nor less than such an amount as can be converted into steam or gas by the heat transmitted to it from the entire heating surface of the 2-inch pipes of each cooler. Unless this condition is fulfilled there will be either a portion of the heating surface of each stand, which is the aggregate area of the outer pipe surface of the 2-inch pipes of each cooler. Unless this condition is fulfilled there will be either a portion of the heating surface left ineffective for lack of liquid ammonia to which the heat can be transmitted, or more or less of the refrigerant will pass through the cooling apparatus in liquid state and return to the compressors, curtailing the capacity or efficiency of the latter.

As the refrigerating process is in principle nothing but a process of evaporation, where a fluid of very low boiling point (liquid anhydrous ammonia boiling at 29.6 below zero F.) is converted into steam by the heat transmitted to it from a fluid of a temperature higher than this boiling point, practically the same course is adopted in the refrigerating apparatus of the Illinois Steel Co.'s dry blast plant as that pursued in the universally known evaporating apparatus—namely, steam boiler practice.

The heat extracting (cooling) apparatus as built by the Vilter Manufacturing Co. under its patent 894,285 of July 28, 1908, may be compared with any of the familiar types of horizontal water tube boilers, in which a group of tubes is connected to front and rear water legs carrying a common steam drum, in which the steam separates from the entrained water, as follows: From an elevated receptacle called the accumulator, which is partly filled with liquid ammonia, the latter flows through a large pipe (the rear water leg of the boiler) communicating with the inlet ends of all double pipe coolers into the annular spaces (the tubes of the boiler) formed between the inner wall of the 3-inch pipes and the outer one of the 2-inch

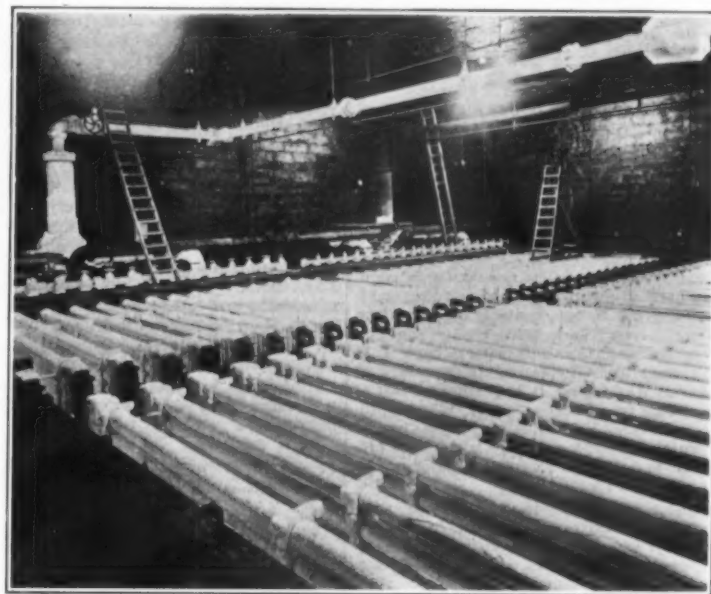


FIG. 2.—REFRIGERATION IN A STEEL PLANT.

maintained in the evaporating or cooling coils of the apparatus.

If the liquid refrigerant were liberated in this condition from the high pressure under which it is delivered from the condenser, its sensible heat at the high temperature corresponding to that pressure would be consumed at once in converting a part of such liquid into gas. This partial conversion into gas of every particle of the fluid would be an instantaneous, flashlike one and would not only cause the loss for effective refrigeration in the cooling coils

000,000 for the purpose of extracting turpentine and rosin from pine stumps and timber, and converting the chips into wood pulp. It is proposed to establish 10 plants, each with a daily capacity of 50 cords, and consideration is now being given to the locations. This company's incorporators include B. F. A. Saylor, J. E. Dean, J. D'Arcy and E. A. Heard of Rome, Ga., and F. L. Cutting of Asheville, N. C. It can be addressed care of Mr. Heard at Rome.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seems to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECT

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Augusta, Ga.—Bids will be opened January 12 for furnishing all labor and material and constructing complete, except piers, steel bridge with draw span over Savannah River at Center street; eight spans of total length of 928 feet; estimated cost, \$45,000; Nisbit Wingfield, City Engineer. (Contract for stone piers recently mentioned awarded to John H. McKenzie's Sons of Augusta.)

Birmingham, Ala.—Jefferson and Shelby counties are considering construction of bridge over Cahaba River at Caldwell's Bridge. Address County Commissioners of Jefferson county at Birmingham, or of Shelby county at Columbiana, Ala.

Dallas, Texas.—Dallas County Commissioners have adopted plans for remodeling or rebuilding five Dallas county bridges spanning Trinity river; Jack Witt, county engineer, was instructed to submit plans to Capt. A. E. Waldron, to be forwarded to Secretary of War at Washington, D. C.; estimated cost of repairing four bridges (Molloy, Wilmer, Miller's Ferry and Hutchins) is \$160,700; cost of county's part of new bridge which it is proposed to build near Santa Fe Railway crossing is about \$25,000.

Glengary, W. Va.—Berkeley County Commissioners, Martinsburg, W. Va., will award contract December 19 for construction of steel bridge over Back Creek near Glengary; camel-back bridge; 154-foot span; 16-foot roadway; cost \$4000 to \$5000; engineer in charge, C. P. C. Rinker, Martinsburg, W. Va.; plans, etc., at office of County Clerk, Harold H. Bender, Martinsburg; sub-structure contract let to York Bridge Co., York, Pa.

Lexington, Ga.—Oglethorpe county's \$50,000 bond issue for bridge improvements and construction and repair of public roads and bridges has been defeated; W. J. Knox, Commissioner of Roads and Revenues. (Recently mentioned.)

Lynchburg, Va.—Common Council adopted resolutions instructing engineering department to prepare plans at once for construction of proposed viaduct over Southern Railway tracks on Fifth avenue; H. L. Shaner, City Engineer.

Norfolk, Va.—City Council is considering appropriation of \$9000 for construction of bulkhead and bridge over Mahone's Lake Canal; W. T. Brooke, City Engineer.

St. Louis, Mo.—Plans for piers of municipal free bridge have been approved by Brigadier-General Marshall, Chief of Engineers, U. S. Army, Washington, D. C.; structure will be double-deck bridge, 2000 feet long, with center-span stretch of 620 feet; clearance of 65 feet above high water is provided. A. J. O'Reilly, president Board of Public Improvements, estimates cost, including approaches, at more than \$3,500,000. (Previously mentioned.)

CANNING AND PACKING PLANTS

Annapolis, Md.—Braun Packing Co. incorporated with \$20,000 capital stock by A. C. Braun, O. E. Braun, James Stehle and others; company comprises Braun Packing Co., Eastport, Md., and E. O. Braun Company, Annapolis.

Gainesville, Fla.—F. D. Warner and Gainesville Melon-Growers' Association will rebuild packing-house destroyed by fire.

Kansas City, Mo.—Blue Valley Packing Co. incorporated with \$50,000 capital stock by W. F. Lyons, A. A. McDonough and J. B. Offutt.

Oklahoma City, Okla.—Schwarzschilf and Sulzberger Co. of Chicago, Ill., contemplate building packing plant in Oklahoma, but is not now prepared to state details.

Poquoson, W. Va.—Company has been temporarily organized with E. B. Smith president and William H. Hopkins, Jr., secretary, to establish cannery. (Recently mentioned.)

Stowell, Texas.—Company organized with \$5000 capital stock to establish cannery; R. M. White, president; W. W. Gregory, vice-president; L. C. Ogden, secretary and treasurer; J. M. Bourlans, general manager.

CLAYWORKING PLANTS

Birmingham, Ala.—Fire Bricks.—Harrison-Walker Refractories Co., A. N. Spencer, technical engineer, Farmers' Bank Bldg., Pittsburgh, Pa., has decided to build proposed plant previously mentioned; will erect buildings of reinforced concrete and install machinery for daily capacity of 40,000 fire bricks; plant will cost about \$250,000; supplies nearly all purchased; will begin construction before January 1.

Elkins, W. Va.—Elkins Brick Co. has erected plant to replace buried structure, and new machinery will be installed at once. (Previously mentioned.)

Florence, Ala.—Bricks and Tile.—J. H. Houck, Atlanta, Ga., contemplates establishment of brick and tile plant in Florence.

Gadsden, Ala.—Pottery.—Cook Bros. Pottery Co., Sterrett, Ala., has, it is reported, purchased old factory and will equip for pottery plant; at present only one drykiln will be erected, with capacity of 4000 gallons weekly. (Recently mentioned.)

Live Oak, Fla.—Bricks.—Florida Brick Co., F. W. Butler, president, will establish plant to manufacture sand-lime brick; daily capacity 15,000 bricks; no machinery needed; D. G. Bardin, manager.

Orange, Texas.—F. A. Snead, Mammon, La., proposes establishment of brick plant in Orange with capacity of 40,000 bricks daily.

Sugar Creek, Mo.—Bricks.—Kansas City Brick & Stone Co., Kansas City, Mo., will, it is reported, establish brick plant near Sugar Creek.

Wellsville, Mo.—Fire Brick.—Eugene Green (representing a St. Louis glass company) proposes establishment of fire-brick plant in Wellsville to cost about \$50,000; company has option on about 2000 acres containing deposits of fire clay.

Winfield, Texas.—Pottery and Fire Brick.—Winfield Pottery and Fire Brick Works is being reorganized with \$30,000 capital stock to operate plant at Winfield, of which J. C. Hogue has been sole owner and manager; manufacture glazed stone ware and fire brick; no further machinery needed. (Will not establish plant at Mt. Pleasant, recently incorrectly reported.)

COAL MINES AND COKE OVENS

Alabama.—C. E. Everett, 140 Dearborn St., Chicago, Ill., recently noted purchasing coal lands in Alabama, states that plans for de-

velopment are not fully matured; mine will probably be equipped for 1000 tons daily output; capacity to be doubled later; two miles railroad track from main line and cableway to convey coal from mine to tippie will be required.

Birmingham, Ala.—Primrose Coal & Coke Co. incorporated with \$40,000 capital stock by E. W. Byrne, Jr., J. W. Gaston and Clement F. Jackson.

Birmingham, Ala.—Industrial Lumber & Coal Co. incorporated with \$10,000 capital stock.

Charleston, W. Va.—Courtenay Company, recently reported incorporated with \$1,000,000 capital stock by Geo. E. Price and others, will take over individual land holdings; will not construct.

Charleston, W. Va.—Virginian & Tidewater Coal Co. incorporated with \$50,000 capital stock by Harrison B. Smith, Buckner Clay, George E. Price and others.

Cordova, Ala.—Oak Leaf Coal Co. incorporated with \$50,000 capital stock by C. J. Thaxton, G. M. Webb and J. M. Bradley.

Deepwater, Mo.—Brush Coal Co. incorporated by Nathan Frensdorf, Sig. Frensdorf and A. R. Dickey.

Huntington, W. Va.—Kenova Coal Mining Co. incorporated with \$50,000 capital stock by P. H. Grelle, Hartford, W. Va.; C. J. Warmack and A. C. Blowers, both of Pineville, Ky.; Henry Holverschild and Harry W. Barker, both of Chicago, Ill.

Jasper, Ala.—Long Coal Co. incorporated with \$50,000 capital stock by T. L. Long, J. O. Long, F. M. Long and E. W. Long.

Ludlow, Ky.—Stone Gap Oil, Gas & Coal Co. incorporated with \$30,000 capital stock by Dr. Frank Crigler, Joel C. Clore, both of Ludlow, and Clay Steel, Monticello, Ky.

Pike County, Ky.—Harry A. Locke, Philadelphia, Pa., and others are negotiating, it is reported, for purchase of 131,000 acres of coal and timber land in Pike county.

Rising Fawn, Ga.—O. F. Jones, L. S. Colyar and Miller Bros. of Chattanooga, Tenn., have purchased, for development, the Phoenix Iron & Coal Co.'s coal and iron properties.

Robard, Ky.—Southern Coal & Transportation Co. incorporated with \$500,000 capital stock by John W. Miller, George C. Ross and G. H. Kunst, all of Grafton, W. Va., and others.

CONCRETE AND CEMENT PLANTS

Elm Grove, W. Va.—Elm Grove Supply & Construction Co. will erect addition to building to be used for manufacture and storage of cement blocks.

COTTON COMPRESSES AND GINS

Dalton, Ga.—Union Gin Co. incorporated with \$4000 capital stock and privilege of increasing to \$10,000 by T. C. Hix, Gus Yeager, J. W. Smith and others.

Helena, Ark.—Solomon-Moore Land Co. will rebuild cotton gin reported in October destroyed by fire at loss of \$10,000.

Shaw, Miss.—Shaw Cotton Oil Co. contemplates rebuilding in spring cotton gin recently mentioned. (See "Machinery Wanted.")

Tatum, S. C.—J. A. Stanton Company incorporated with \$25,000 capital stock by J. A. Stanton, J. A. Stanton, Jr., and Leroy Stanton.

Trenton, S. C.—S. T. Hughes will probably rebuild cotton gin in the summer; recently destroyed by fire at loss of \$2000.

COTTONSEED-OIL MILLS

Rossllyn, Va.—Columbia Cotton Oil & Provision Corporation, Metropolitan Bank Bldg., Washington, D. C., awarded contract for erection of five-story building recently mentioned; reinforced concrete fireproof structure; 105 feet 3 inches by 57 feet 3 inches; skeleton frame; reinforced concrete platforms; tunnel to connect basement with abattoir building; basement to be insulated and refrigerated for curing cellar; third floor to support tanks on four sides about center quadrangle; offices, toilets, laboratory and process-rooms on fourth floor; electric lighting; ventilation; sanitary plumbing, with partitions of gray pressed brick; monitor above roof, to supply light and ventilation to fifth floor, will also contain 30,000-gallon water reservoir; freight and passenger elevators; iron stairs; plans by Clarence A. Coburn, Metro-

politan Bank Bldg., Washington, who will supervise construction and installation of plant; company principally refines cottonseed oil; capacity 1000 barrels daily; manufactures all food products and soaps from vegetable and animal fats and oils; also, meat products; George P. Sacks, president; W. G. Carter, secretary; Thomas Gant, treasurer; E. N. Brown, general manager; capital stock, \$300,000. (See "Miscellaneous Manufacturing Plants.")

Brady, Texas.—C. H. Bencini, Fort Worth, Texas, is completing arrangements for establishment of cottonseed-oil mill in Brady, to cost \$7000. (Recently mentioned.)

ELECTRIC-LIGHT AND POWER PLANTS

Atlanta, Ga.—Piedmont Power Co. incorporated with \$3,000,000 capital stock and privilege of increasing to \$10,000,000; to develop water-power on Tugalo River, estimated to furnish 20,000 horse-power; W. L. Peel, F. J. Paxon, William M. Nixon, Davis Woodward, Sam D. Jones and others are incorporators.

Atlanta, Ga.—Atlanta Power Co. incorporated with \$25,000 capital stock, and privilege of increasing to \$1,000,000, by E. A. Neely, Alexander King and others; to establish electric-power plants, develop water-power of Chattahoochee River and other streams, etc.

Belington, W. Va.—Consumers' Heat, Light, Water & Power Co. increased capital stock from \$60,000 to \$135,000 and will undertake improvements, including extension of lines and new system of generating electricity.

Easton, Md.—H. B. Messenger, Federalburg, Md., is considering construction of electric-light plant at Easton, and has asked City Council for street-lighting contract.

El Reno, Okla.—El Reno Gas & Light Co., H. H. Stephens of El Reno, general manager, will build 25-foot extension to electric-light building and install 600-horse-power engine, which will double capacity of plant; electric line and gas mains will each be extended five miles; cost of improvements about \$40,000.

Eufaula, Ala.—Pioneer Electric & Power Co. incorporated with \$5000 capital stock by C. E. Foley, Phil Brown, C. H. Tully and J. T. Primrose.

Highland Park, P. O. Richmond, Va.—City will grant 10-year franchise for construction of electric-light and power system; bids to be opened January 6; W. P. Redd, 1114 East Main St., Richmond, is Mayor. (See "Machinery Wanted.")

Hubbard City, Texas.—Union Central Light & Ice Co., W. A. Bass, president, has secured franchises and completed surveys, plans and specifications for construction of electric-light plant to cost \$100,000; company will supply lighting and power and manufacture ice; Judson H. Houghton, National Light & Improvement Co., Pierce Bldg., St. Louis, Mo., is engineer. (Recently mentioned.)

Jennings, La.—Southern Heat & Light Co. incorporated with \$100,000 capital stock; F. E. Bliss is president; F. E. Morse, vice-president, and G. S. Forest, secretary-treasurer.

Leesburg, Fla.—City invites bids until January 5 for water-works and electric-lighting plant; will give five-year contract carrying with it 30-year franchise; L. M. Johnson, clerk. (See "Machinery Wanted.")

Macon, Mo.—City has voted issuance of \$18,400 of bonds for electric-light plant and water-works; Edward S. Bennett of Macon is engineer.

Marlow, Okla.—City is considering improvements to electric-light plant and water-works; estimated cost, \$10,000. Address The Mayor.

Mount Airy, N. C.—J. D. Minick has secured Spaulth Mill property on Ararat River and proposes to raise dam, install dynamo and develop water-power, which is estimated at 50 horse-power. (See "Foundry and Machine Plants.")

Pass Christian, Miss.—City Council has contracted with Gulfport & Mississippi Coast Traction Co., Gulfport, Miss., for construction of electric-light system, to be in operation by April 1, 1909; city agrees to take not less than \$1800 worth of street lights per annum for 10 years. (Recently mentioned.)

Pineville, Ky.—R. L. Bowman will rebuild Pineville Light & Ice Co.'s light plant and

ice factory, reported destroyed by fire at loss of about \$25,000; arrangements will be made with Wallend Coal & Coke Co. to furnish power and lights until plant is rebuilt.

Polytechnic Heights, P. O. Forth Worth, Texas.—Polytechnic Light & Power Co. incorporated with \$15,000 capital stock by D. R. Aikin, R. H. Fulton and F. V. Evans.

Seminary, Miss.—John W. Burge of Mobile, Ala., and associates have purchased Seminary Falls and plan to build dam for developing 300 horse-power, to be transmitted by electricity; T. W. Nichol of Mobile is consulting engineer, and has made survey and estimated cost of dam; paper mill will be established in this connection.

Somerville, Texas.—Somerville Electric Light & Manufacturing Co. incorporated with \$10,000 capital stock by R. E. Bledsoe, J. D. Giddings, E. P. Reynolds and others.

Tenaha, Texas.—Lem Hill will install electric-light plant within next six months; has 50-year franchise. (Recently noted.)

Vidalia, La.—Stimms Express & Telegraph Co., Natchez, Miss., will install electric-light plant. (See "Warehouses" and "Machinery Wanted.")

FLOUR, FEED AND MEAL MILLS

Birmingham, Ala.—Corn Meal.—Wood & Crabbe Grain Co., Wade Wood, president, recently noted to establish corn-meal mill of 5000 bushels daily capacity, will erect mill 60x130 feet; architect not announced; cost \$11,000; machinery mainly purchased. (See "Machinery Wanted.")

Fargo, Okla.—Fargo Alfalfa Milling Co. incorporated with \$15,000 capital stock by B. J. Hobbs, Clyde Ingle, Louis Zahn and others.

Mt. Airy, N. C.—J. D. Minick has purchased Spauld Mill property and will operate grist mill. (See "Foundry and Machine Plants.")

Perryville, Mo.—Perry County Milling Co., recently reported incorporated, will operate plant with daily capacity of 150 barrels; no machinery needed; W. R. Wilkinson, president; E. Estel, vice-president; Ludwig Meyer, manager and treasurer.

Sweetwater, Texas.—J. R. Henderson & Co., Center Point, Texas, have, it is reported, purchased Keystone Flour Mill and will overhaul and operate.

Tazewell, Va.—Star Milling Co. incorporated with \$25,000 capital stock; C. A. Fudge, president; L. A. Tynes, vice-president; J. R. Laird, secretary and treasurer.

Trenton, Tenn.—Forked Deer Roller Mill Co. incorporated with \$16,000 capital stock by J. J. Tatum, W. W. Wade, W. L. Wade and others.

Yukon, Okla.—Flour and Meal.—Yukon Mill & Grain Co., J. F. Kroul, president, will erect proposed new mill; brick construction; contracts for erection of building and for installation of power plant will probably be awarded this month; machinery ordered.

FOUNDRY AND MACHINE PLANTS

Amity, Mo.—Implements.—J. B. Winter Implement Co. incorporated with \$5000 capital stock by J. B. Winter, J. C. Douglass, Robert Thompson and others.

Baltimore, Md.—Ice Machines.—Vacuum Ice Machine Co. incorporated with \$100,000 capital stock by John Patten, Charles S. Taylor, Charles A. Ridgely; offices, 40 S. Front St.

Baltimore, Md.—Bag-stringing Machines.—Automatic Bag Stringer Co. incorporated with \$25,000 capital stock by R. H. Wright, H. A. Foushee, both of Durham, N. C.; W. H. Crowell, Baltimore; E. J. Tucker, Roxboro, N. C., and others.

Barnesville, Ga.—Cotton Choppers.—Southern States Manufacturing Co. organized with \$10,000 capital stock; J. A. McCrary, president; J. W. Garland, vice-president; J. T. Middlebrooks, secretary and treasurer.

Big Stone Gap, Va.—Coke-oven Doors.—American Coke-Oven Door Co., recently reported incorporated, will not establish plant at present; will place orders for manufacture of doors (plain casting) with foundries in coking sections; J. A. L. Minor, president and general manager; J. J. Alley, vice-president; J. W. Kelly, secretary; Interstate Finance & Trust Co., treasurer.

Corinth, Miss.—Concrete Machinery.—Economy Concrete Machinery Co., organized by E. P. Anger and others to replace former company of E. P. Anger, Son & Co.; suitable building will be erected.

Elizabeth City, N. C.—Iron Works.—Elizabeth City Iron Works & Supply Co. incorporated with \$100,000 capital stock by J. F. Sanders, Brad Sanders, Andrew Sanders and H. W. Sanders; succeeds and takes over plants of Elizabeth City Iron Works and

Elizabeth City Supply Co., both of 305-307 Pearl St.; machine shop and foundry, 405-407 Pearl St.; brass, iron, boiler and general repair work, etc.

Ensley, Ala.—Electrical Repair Shop.—Tennessee Coal, Iron & Railroad Co., main office, Birmingham, Ala., will erect electrical repair shop for blast-furnace department; 70x40 feet; plant will be equipped for repairing all kinds of electrical work.

Greensboro, N. C.—Motors, Engines and Machinery.—Atlantic Motor Co. incorporated with \$25,000 capital stock by H. L. Hopkins, L. B. Hopkins and Thos. S. Beall.

Knoxville, Tenn.—Mining Machinery, etc.—Meyers-Whealey Company incorporated with \$100,000 capital stock by Roy V. Meyers, William Whaley, Joseph J. Reed and others.

Mt. Airy, N. C.—Iron Foundry.—J. D. Minick has purchased Spauld Mill property on Ararat River and will operate iron foundry, machine shop and grist mill; he also proposes to raise dam and develop water-power estimated to furnish 50 horse-power; dynamo may be installed and electric-power sold.

New Decatur, Ala.—Farming Implements.—Cotton Growers' Industrial Co., recently noted to establish plant with capacity of 20,000 machines annually, will erect suitable buildings, including main building 60x175 feet; foundry about 40x50 feet; machine shops, offices, warehouses, etc.; company may be addressed care of Charles Bassett, secretary The Development Company, Decatur, Ala.

New Orleans, La.—Blacksmith.—Paul Robert Beder will establish blacksmith and wheelwright shop.

Oklahoma.—Oil-well Equipments.—Hines Manufacturing Co. of Portland, Ind., will establish in Oklahoma and West Virginia oil fields branch plants for manufacture of sectional steel drilling derricks, windmill derricks, steel towers for water tanks, drilling machines and appliances and supplies for gas, oil and water; exact location of plants not determined. Omer S. Whiteman is secretary. (See "Machinery Wanted.")

Plant City, Fla.—Locomotives, Boilers, etc.—George Randle, Lakeland, Fla., proposes organization of company with \$10,000 capital stock to establish locomotive, boiler and machine plant in Plant City.

St. Louis, Mo.—Radiators, etc.—Continental Radiator & Foundry Co. incorporated with \$50,000 capital stock by L. F. Ostrander, W. F. Richards, W. K. Richards and others.

Tampa, Fla.—Anti-frictional Bearings.—Anti-Frictional Bearing Co. incorporated with \$100,000 capital stock; W. B. Denham, president; A. B. Chapman, vice-president and general manager; Eugene L. Hart, secretary and treasurer.

GAS AND OIL DEVELOPMENTS

Bartlesville, Okla.—Henry Gas Co. incorporated with \$10,000 capital stock by James A. Vasey, Lucy M. Jennings, both of Bartlesville, and Robert L. Henry, Chicago, Ill.

El Reno, Okla.—El Reno Gas & Light Co., H. H. Stephens, manager, will, it is reported, expend about \$40,000 in improvements, including construction of natural-gas pipe line from Tulsa to El Reno, extending electric line and gas mains and extension and improvements to electric-light plant. (See "Electric-light and Power Plants.")

Holdenville, Okla.—Second Oil Co. incorporated with \$10,000 capital stock by H. B. Gooch, O. D. Smith, L. C. Parmenter and R. W. Parmenter.

Houston, Texas.—Meteor Oil Co. incorporated with \$15,000 capital stock by W. J. Fuqua, G. C. Perkins, M. J. O'Laughlin and others.

Ludlow, Ky.—Stone Gap Oil, Gas & Coal Co. incorporated with \$30,000 capital stock by Frank Crigler, Joel Clore and others.

Marshall, Texas.—Eureka Oil Co. organized with M. W. Stokes president, Charles Carney secretary, Dan Byrnes treasurer; to develop tract of five acres on Pine Island for oil deposits.

Muskogee, Okla.—Martha Oil Co. incorporated with \$8000 capital stock by C. H. Maten, W. L. Linard, both of Muskogee; F. C. Smedley and A. W. Smedley, both of Tulsa, Okla.

New Orleans, La.—Standard Oil Co., 26 Broadway, New York, has decided, it is reported, to proceed with construction of proposed pipe line to convey oil from the Caddo fields to New Orleans, where company plans to build a large refinery. It is understood surveys are now progressing and that they provide for following right of way of Louisiana Railway & Navigation Co., the distance being 306 miles. Standard pipe line is understood to be planned as continuation of pipe

line of Prairie Oil & Gas Co., main office Independence, Kans., from Oklahoma to Louisiana. Latter company was mentioned last July as proposing to build its line from Oklahoma through Arkansas and Louisiana to the Gulf.

Sherman, Texas.—Red River Oil & Gas Co. has been granted natural-gas franchise by the city.

Shreveport, La.—Excelsior Land & Oil Co. organized with \$30,000 capital stock; E. Wales Brown, president; Sterling Plamer, vice-president; Leslie Pennington, secretary and treasurer; company will develop oil properties on Pine Island.

Tulsa, Okla.—Saunders Oil & Gas Co. incorporated with \$30,000 capital stock by T. S. Saunders, G. G. Sharpe and E. S. Harris.

Tulsa, Okla.—Commercial Club is promoting organization of company with \$100,000 capital stock to construct pipe line to Collinsville gas field at cost of \$75,000.

Wellsburg, W. Va.—Miller Oil & Gas Co. incorporated with \$6000 capital stock by W. M. Miller, Wellsburg; J. R. Miller, John McKinley, both of Carnegie, Pa., and others.

Wheeling, W. Va.—McCracken Oil & Gas Co. incorporated with \$500,000 capital stock by J. F. Stohman, Wm. McCracken, C. G. England and others.

Wheeling, W. Va.—Bridgeport Venture Oil & Gas Co. incorporated with \$15,000 capital stock by J. H. Montgomery, Wheeling; I. N. Raymer, Bridgeport, Ohio; F. S. Flack, Taylorstown, Pa., and others.

ICE AND COLD-STORAGE PLANTS

Aliceville, Ala.—D. H. Bowlin, Columbus, Miss., proposes establishment of ice plant. (See "Miscellaneous Manufacturing Plants.")

Baltimore, Md.—Louis Eckels & Sons Ice Manufacturing Co., 802-806 East Eager St., will erect two ice plants; one story; brick, iron and wood; concrete and brick in cement foundations; flat slag roof; estimated cost \$3000; one plant at 240 South Register street and one at 1706 Gough street.

Baltimore, Md.—Vacuum Ice Co., 28-40 South Front St., will erect five-story vaporizer at 35-40 South Front street; building will be one story; the five stories of the vaporizer will be on inside and will be 50 inches each in height; vaporizers will be 5 feet 9 inches by 19 feet 3 inches, and will have capacity of 125 tons.

El Paso, Texas.—El Paso Ice & Refrigerating Co. has increased capital stock from \$100,000 to \$200,000.

Franklin, Ky.—Franklin Electric & Ice Co., recently reported incorporated, awarded contract to T. J. Christman & Co., Nashville, Tenn., for erection of proposed plant; 60x90 feet; brick; mill construction; cement floors; metal roof; walls lined with cork; cost about \$10,000; machinery for 18-ton plant purchased from Henry Vogt Machine Co., Louisville, Ky.; plans by McDonald & Todd, Louisville, Ky.

Nashville, Tenn.—Independent Ice Co. incorporated with \$60,000 capital stock by J. A. Green, J. C. Allen, F. H. Alley and others.

Pineville, Ky.—R. L. Bowman will rebuild Pineville Light & Ice Co.'s ice and light plants reported destroyed by fire at loss of about \$25,000.

Roslyn, Va.—Columbia Cotton Oil & Provision Corporation, Washington, D. C., will install refrigerating machinery in curing cellar. (See "Miscellaneous Manufacturing Plants" and "Cottonseed-oil Mills.")

IRON AND STEEL PLANTS

Benwood, W. Va.—Iron Furnace.—National Tube Co. is reported as having adopted plans for construction of blast furnace to replace furnace A, which will be demolished; also reported as contemplating an addition to steel mill. General offices in Frick Bldg., Pittsburgh, Pa.

Birmingham, Ala.—Iron Furnace.—Sloss-Sheffield Steel & Iron Co. is reported as about to begin reconstructing No. 3 furnace, which has been idle; to reline, build new stoves, etc., within next four months; cost about \$250,000.

Clayton, Mo.—Iron Works.—E. E. Southern Iron Co. increased capital stock from \$60,000 to \$100,000.

Cumberland, Md.—Ralls.—Maryland Rail Co. increased capital stock from \$100,000 to \$150,000.

Middlesboro, Ky.—Iron Furnace.—Virginia Iron, Coal & Coke Co., John B. Newton, general manager, has blown in its Middlesboro furnace; repairs have been made; office address, Roanoke, Va.; New York office at 40 Wall street. (Recently mentioned.)

LUMBER-MANUFACTURING PLANTS

Birmingham, Ala.—Tallapoosa Timber Co. incorporated with \$30,000 capital stock by S. A. Woods, J. A. Woods, J. H. Campbell and others.

Bon Wier, Texas.—Long-Leaf Lumber Co. will erect circular-saw mill to replace present plant; capacity 80,000 feet daily.

Coffield, N. C.—Coffield Manufacturing Co. incorporated with \$10,000 capital stock by B. G. Williams and others.

Diboll, Texas.—Southern Pine Lumber Co. has increased capital stock from \$750,000 to \$1,250,000.

Geneva, Ala.—Malvern Naval Stores Co. incorporated with \$20,000 capital stock by E. Kersey, W. E. Moreland, C. M. Hartzog and others.

Gibbsland, La.—Leldigh & Dalton Lumber Co., Ltd., recently noted to expend \$30,000 in doubling capacity of plant, has purchased machinery and will operate plant about January 1.

Jackson, Miss.—Purnell Lumber Co. incorporated with \$10,000 capital stock by G. M. Purnell, J. T. Allen, P. S. Merrill and others.

Jonesboro, Tenn.—Brading-Marshall Lumber Co. incorporated with \$50,000 capital stock by J. E. Brading, C. L. Marshall, S. L. Browder and others.

Lasater, Postoffice Pyland, Texas.—Connor-Campbell Lumber Co., Wynnboro and Pyland, Texas, recently reported incorporated, will establish saw and planing mill near Lasater; will erect 30x100-foot building to cost \$15,000; daily capacity, 30,000 feet yellow pine rough and dressed lumber; sales office, Wynnboro; machinery purchased.

Montgomery, Ala.—Industrial Lumber & Coal Co. incorporated with \$10,000 capital stock.

Mt. Washington, Md.—Southern Export Lumber Co. incorporated with capital stock of \$25,000 by A. B. Wentworth and others.

New Orleans, La.—Oyaka Naval Stores Co. incorporated with \$30,000 capital stock by J. A. Carr, A. S. Carr and G. F. Mason.

New Orleans, La.—Avoyelles Cypress Co., Ltd., incorporated with \$100,000 capital stock by Eugene B. Williams, Henry W. Taylor, Ossian H. Williams and others.

New Orleans, La.—Robinson Lumber, Veneer & Box Co. has taken over property of L. W. Robinson Lumber Co., comprising various mills in Mississippi and Alabama; will operate mills; daily capacity, 100,000 feet lumber. (See "Woodworking Plants.")

Pachuta, Miss.—Sam A. Neville, Meridian, Miss., has, it is reported, purchased 6000 acres of timber land near Pachuta, containing about 30,000,000 feet of timber, which he will cut and place on market; after timber has been cut land will be cultivated.

Pampa, Texas.—Pampa Lumber Co. incorporated with \$10,000 capital stock by J. H. Skaggs, S. S. Thomas, J. T. Crawford, Jr., and D. C. Davis.

Pike County, Ky.—Harry A. Locke, Philadelphia, Pa., is, it is reported, negotiating for purchase of about 131,000 acres of timber and coal lands in Pike county.

St. Landry (not a postoffice), La.—Climax Lumber Co., W. D. Haas, Bunkie, La., president, is installing machinery for eight-foot band mill of 40,000 feet daily capacity; machinery mainly purchased.

Waiteville, W. Va.—Potts Valley Lumber Co. incorporated with \$25,000 capital stock by S. S. Lafan, W. M. Lafan, E. B. Lafan and others.

MINING

Bedford City, Va.—Iron, Copper, Lead, etc. Piedmont Spar Co. incorporated with \$60,000 capital stock; C. L. Boyer, president, Circleville, Ohio; Landon Lowrey, vice-president, Bedford City.

Centerville, Tenn.—Phosphate.—A. H. Gray has, it is reported, secured option on phosphate land in Shipp's Bend and will arrange for development.

Cumberland, Md.—Glass Sand.—Gyron Husband and others of Pittsburgh, Pa., have purchased and will develop 111 acres of glass-sand lands two miles from Cumberland; will incorporate company.

Danbury, N. C.—W. L. McConless will probably develop asbestos deposits on his property.

Gadsden, Ala.—Marble, Granite, etc.—Southern Marble & Stone Co. will erect 12-gang marble and stone mill; asks estimates on equipment for construction of plant and quarrying machinery. (See "Machinery Wanted.")

Irondale, Ala.—Iron.—Sloss-Sheffield Steel & Iron Co., main offices Birmingham, Ala., will develop another iron mine at Irondale.

Kansas City, Mo.—Lead and Zinc.—Jordan Mines Co. incorporated with \$1,000,000 capital stock by Irwin Jordan, Clinton D. French and George F. McFall.

Knoxville, Tenn.—Zinc.—Southern Reduction Co. incorporated by Norman B. Morrell, Richard P. Johnson, V. A. Huffaker and others.

Lexington, Ky.—Barytes.—A. G. Morgan is promoting organization of company to establish barytes plant.

Luray, Va.—Copper and Gold.—H. F. Brinton contemplates, it is reported, tunneling Stony Man Peak, Page county, to develop gold and copper deposits.

McIntyre, Ga.—Kaolin.—Dederich & Burkett awarded contract to C. F. Pearce, Macon, Ga., for opening and operating kaolin bed.

Nashville, Tenn.—Granite and Stone.—Clayton Granite Stone Co. incorporated with \$100,000 capital stock by J. H. Clayton, John A. Pitts, P. A. Shelton and others.

Rising Fawn, Ga.—Iron, etc.—O. F. Jones, L. S. Colyar and Miller Bros. of Chattanooga, Tenn., have purchased for development the Phoenix Iron & Coal Co.'s coal and iron properties.

Rolla, Mo.—Lead and Zinc.—Newburg Mining & Drilling Co. incorporated with \$10,000 capital stock by B. H. Rucker, C. T. Dana, John Broemmelsick and others.

Spottsylvania, Va.—Sulphur Pyrites.—John M. Holladay will soon begin development of sulphur-pyrites deposits near Knight's Branch; railroad will probably be extended from Louisa to mine.

Tecumseh, Ala.—Iron.—Birmingham Coal & Iron Co., Birmingham, Ala., has, it is reported, purchased properties of Tecumseh Iron Co., consisting of about 10,000 acres of iron-ore lands in Alabama and Georgia; will install additional machinery, operate and increase output of plant.

MISCELLANEOUS CONSTRUCTION WORK

Arcadia, Okla.—Drainage.—Arrangements are being made for reclamation of strip of land about two miles wide frequently inundated by overflow of Deep Fork; drainage ditch 12 miles long will be constructed, extending from two miles west of Arcadia to eastern line of Oklahoma county; will be from 30 to 50 feet wide and 8 feet deep. J. B. Thoburn, W. J. Arthur and A. M. Gustlin have been appointed committee.

Chalmette, La.—Levee.—U. S. engineers awarded contract to George H. Conrad, New Orleans, La., for construction of levee 575 feet long in front of Chalmette National Cemetery, in Lake Borgne Basin Levee District.

Clarksdale, Miss.—Concrete Work.—Hopson Bayou Drainage Commission awarded contract to Southern Concrete Co., Memphis, Tenn., for concrete work at mouth of drainage ditch; concrete work will cost 30 cents per cubic yard, and that reinforced by steel \$12.15; entire contract aggregating \$4300.

Columbia, Tenn.—Underpass.—Louisville & Nashville Railway, W. H. Courteney, chief engineer, Louisville, Ky., has not prepared plan for underpass on Cemetery avenue, Columbia, recently mentioned; work will be done with company's force.

Crisfield, Md.—Dock.—New York, Philadelphia & Norfolk Railroad, W. A. Patton, president, 26 South 15th St., Philadelphia, Pa., will, it is reported, improve dock and depot at Crisfield.

Demopolis, Ala.—Lock Construction.—Ferro-Concrete Contracting Co. of New York expects to begin building of lock No. 3, 27 miles below Demopolis, about December 22. This is a subcontract amounting to about \$500,000 awarded to company by P. H. O'Brien of New York, who secured original contract for constructing Locks Nos. 2 and 3, amounting to about \$1,000,000; James E. Parker, Birmingham, Ala., is superintending construction for Mr. O'Brien. Upon completion of these locks, it is stated, Tombigbee river will be navigable during entire year.

Houston, Texas.—Drainage.—Harris County Commissioners are considering drainage of southwestern portion of Harris county, commencing at Brays and Slaughter Pen bayous and extending to county line; district as planned by George B. Griggs, secretary of South Texas Drainage Association, comprises about 100,000 acres; it is estimated that \$200,000 will be expended.

Kansas City, Mo.—Irrigation.—National Land & Sub-Irrigation Co., Jno. L. Wiggins, president, 422 Shubert Bldg., recently noted incorporated ("organized") with \$3,000,000 capital stock, will cultivate land throughout West and Southwest by Wiggins system of sub-irrigation; company controls patents on

tile-making and power machines, which at first will be built by contract; plant may be erected later for manufacture of machines.

Mobile, Ala.—Docks, etc.—Alabama Docks & Terminal Co., reported incorporated in October, has elected Louis Donald president and J. B. Robertson vice-president; capital stock is \$250,000; company will build docks and fireproof warehouses and install machinery for docks, warehouses, storage-yard and terminals; T. W. Nicoll of Mobile will be constructing engineer.

New Orleans, La.—Levee.—Bids will be opened December 17 for construction of about 13,000 cubic yards of levee work in Atchafalaya Levee District; H. Burgess, Captain, Engineers. (See "Machinery Wanted.")

Norfolk, Va.—Breakwater.—Lynnhaven Terminal Co., J. Edward Cole, secretary, contemplates building breakwater in Lynnhaven Roads; to be of stone, about 2000 feet long, and cost approximately \$1,555,000. It is stated that anchorage could be provided for 300 vessels. Permission has been asked of War Department. (Mentioned in November.)

MISCELLANEOUS ENTERPRISES

Baltimore, Md.—Land Improvement.—Baltimore Highlands Realty Co. incorporated with \$50,000 capital stock by Walter C. Piper, Chicago, Ill.; Ernest X. Lesure, Danville, Ill., and Norville P. Chapman, Howard county, Maryland; company has purchased about 82 acres in Baltimore county, will divide into lots and develop.

Bristol, Va.—Tenn.—Dyeing.—Jonesville Manufacturing Co. will establish dyeing plant in connection with knitting mill; cost \$3000.

Charleston, W. Va.—Land.—Hominy Creek Land Co., recently reported incorporated with \$50,000 capital stock by Geo. E. Price, R. S. Spilman and others, was organized to take over individual holdings of land; no construction.

Chattanooga, Tenn.—Furniture.—Rhodes-Mahoney Furniture Co. will incorporate with \$15,000 capital stock; A. G. Rhodes, president; J. D. Rhodes, vice-president and treasurer; F. E. Mahoney, secretary; succeeds Rhodes-Mahoney Furniture Co., retail dealers.

Chattanooga, Tenn.—Printing, etc.—Imperial Press, 809 Georgia Ave., will increase capital stock to \$10,000; Thos. D. Barr, president and general manager; Randolph Rose, vice-president; I. R. Balcom, secretary and treasurer; company has acquired and will operate plant of Chattanooga Printing & Engraving Co.

Chickasha, Okla.—Construction.—Chickasha Construction Co. incorporated with \$10,000 capital stock by L. R. McManus, W. S. Staley and Ethel Hoover.

Columbia, Miss.—Transportation.—Columbia & Pearl River Transportation Co. incorporated with \$10,000 capital stock by N. H. Drummond, G. H. Rankin, W. E. Lampton and others.

Corsicana, Texas.—Merchandise.—H. Iverson & Co. incorporated with \$25,000 capital stock by V. Henry Iverson, J. R. Slade, both of Corsicana, and H. J. Breithaupt, Powell, Texas.

Courtland, Va.—Peanuts.—Birdsong & Co. incorporated with \$100,000 capital stock; R. P. Birdsong, Philadelphia, Pa., president and treasurer; T. H. Birdsong, Courtland, vice-president and secretary.

Elkins, W. Va.—Land Improvement.—Highland Park Development Co. incorporated with \$25,000 capital stock by B. W. Taylor, R. H. Allen, F. A. Holsberry and others.

Elizabeth City, N. C.—Land Improvement.—Stevens Land Co. incorporated with \$100,000 capital stock by C. W. Stevens, E. F. Aylett and others.

Enid, Okla.—Steam Laundry.—Star Laundry Co. incorporated with \$10,000 capital stock by T. C. Cones, C. A. Moore and D. D. Cones.

Fort Worth, Texas.—Seed.—Southern Seed Co. incorporated by C. W. Young, J. S. McCawley and F. A. Martin.

Gastonia, N. C.—Feed and Coal.—J. Fleming Johnson Co. incorporated with \$12,000 capital stock by L. L. Bryson and others.

Jackson, Mo.—Mercantile.—McAtee Mercantile Co. incorporated with \$8500 capital stock by J. M. McAtee, A. H. Knelbert, A. W. Rolo and others.

Kansas City, Mo.—Land Improvement.—Fairfax Land & Improvement Co. incorporated with \$28,000 capital stock by Arthur M. Allen, Anna M. Morris, Arthur M. Allen, Jr., and others.

Kansas City, Mo.—Printing.—Novelty Card & Printing Co. incorporated by J. W. McCallum, G. E. Woodcox and William Meyer.

Kansas City, Mo.—Land Improvement.—J.

C. Nichols Realty Co. incorporated with \$50,000 capital stock by J. C. Nichols, H. F. Hall and F. C. Crowell.

Lawrenceburg, Tenn.—Printing.—Times Printing Co. incorporated by W. P. Fleeman, J. P. Kidd, D. W. Starnes and others.

Little Rock, Ark.—Steam Laundry.—People's Laundry will install \$5000 worth of additional machinery.

Marion, S. C.—Land Improvement.—Marion Real Estate & Development Co. incorporated with \$10,000 capital stock by R. J. Blackwell, Marion; John K. Ragsdale, D. B. Traxler and A. B. Taylor, all of Greenville, S. C.

Matoaka, W. Va.—Supplies.—Matoaka Supply Co. incorporated with \$10,000 capital stock by C. H. Gilmer, M. G. Gilmer, W. E. Gilkeson, all of Bluefield, W. Va., and others.

Memphis, Tenn.—Land Improvement.—Terminal Land Co. incorporated with \$50,000 capital stock by J. M. Baker, C. D. M. Greer, George M. Tidwell and others.

Memphis, Tenn.—Mercantile.—Blackburn-Browne Company incorporated with \$20,000 capital stock by Cliff S. Blackburn, Roscoe G. Browne, F. H. Venn and others.

Meridian, Miss.—Contracting.—Rubush-Dabbs Construction Co. incorporated with \$50,000 capital stock by C. M. Rubush, C. H. Dabbs, T. M. Lyle and others.

Meridian, Miss.—Publishing.—The Dispatch Company incorporated with \$30,000 capital stock by B. S. Bernard, Frank L. Mayes and others.

Midland, Texas.—Gary, Burns & Elliott incorporated with \$50,000 capital stock by F. F. Gary, G. D. Elliott and H. F. Burns.

Morgantown, W. Va.—Land Improvement.—Fidelity Company incorporated with \$5000 capital stock by J. R. Harworth, Huntington, W. Va.; E. L. Colcord, St. Albans, W. Va., and others.

Mt. Sterling, Ky.—Tobacco Prizery.—J. Will Clay and G. L. Kirkpatrick are interested in establishment of tobacco prizery and rebalancing house with capacity of 100 hogsheads daily.

Nashville, Tenn.—Milk Depot.—Davidson County Dairymen's Association contemplate establishment of milk depot; Harding Jackson, Ed. Gasser and W. G. Bogle, committee.

Newnan, Ga.—Mercantile.—T. G. Farmer & Sons Company incorporated with \$30,000 capital stock by Thomas G. Farmer and Charles W. Farmer.

Oklahoma City, Okla.—Engraving.—George W. Greene will establish engraving plant at Robinson and Second streets.

Oklahoma City, Okla.—Steam Laundry.—Crystal Laundry Co. incorporated with \$10,000 capital stock by F. C. Laycock, John H. Myers and Clifford C. Myers.

Oklahoma City, Okla.—Automobiles.—Fritz Bros. Auto. Co. incorporated with \$40,000 capital stock by D. Fritz, E. J. Fritz and R. W. Yantis.

Pine Bluff, Ark.—Land Improvement.—Park Land Co. incorporated with \$100,000 capital stock; R. L. Rutherford, president; J. F. Rutherford, vice-president; T. Y. Murphy, secretary and treasurer.

Pine Bluff, Ark.—Land Improvement.—Arkansas Realty Co. incorporated with \$100,000 capital stock; R. L. Rutherford, president; J. F. Rutherford, vice-president; T. Y. Murphy, secretary and treasurer.

Plymouth, N. C.—Mercantile.—Brinkley-Phillips Company incorporated with \$10,000 capital stock by W. D. Carstarphen, I. A. Phillips and P. W. Brinkley.

Poteau, Okla.—Land Improvement.—Poteau Valley Land Co. incorporated with \$5000 capital stock by R. O. Davies, R. G. Bulgin, both of Poteau, and M. F. Maroney, Parkersburg, W. Va.

Richmond, Va.—Printing.—Finch Printing Co. incorporated with \$25,000 capital stock; E. F. Finch, president; C. A. Finch, vice-president; A. P. Spotts, secretary and treasurer.

Rome, Ga.—Publishing.—Masonic Herald Co. incorporated with \$5000 capital stock by Max Meyerhardt, Wilson M. Hardy and J. D. McCartney.

Russellville, Ark.—Steam Laundry.—A. D. Brown, Columbia, La., contemplates establishment of steam laundry in Russellville.

St. Louis, Mo.—Printing.—Printery Company incorporated by Charles E. Morrow, George H. Fenwick and Harry Adolph.

Tulsa, Okla.—Hooper Bros. incorporated with \$25,000 capital stock by A. C. Hooper, B. A. Hooper and R. L. Davidson.

Verona, Miss.—Garmon Bros. Company incorporated with \$10,000 capital stock by R. W. Garmon, A. J. Folgo and others.

Virginia Beach, Va.—Oysters.—Lynnhaven Oyster Co. incorporated with \$30,000 capital

stock; J. S. Grofes, Virginia Beach, president; C. T. Whitehead, Norfolk, Va., vice-president and general manager.

Washington, D. C.—Rugs.—Hekimian Company incorporated with \$10,000 capital stock by M. N. Hekimian, 13th and G Sts. N. W.; Fred Beall of Beall & Marine, Pacific Bldg.; W. B. Jaynes, 23 1st St. N. E., and others.

Williamson, W. Va.—Publishing.—Mingo Republican Newspaper Co. incorporated with \$10,000 capital stock by John A. Sheppard, Wells Goodykoontz, Harry Scherr and others.

MISCELLANEOUS MANUFACTURING PLANTS

Alliceville, Ala.—Bottling, etc.—D. H. Bowlin, Columbus, Miss., proposed organization of company with \$10,000 capital stock to establish plant for manufacturing phosphate, vinegar, etc., with bottling and ice plant in connection.

Asheville, N. C.—Mica Products.—Great Southern Mica Co., J. J. Sullivan, president, main offices, Cleveland, Ohio, recently noted to centralize Southern plants at Asheville, will manufacture punch mica, including disk washers and odd-shaped patterns; wet and dry ground mica and stove and electrical mica; also contemplates making mica; capacity not yet estimated; will complete building started for ice plant; brick structure, 62x120 feet; two stories; cost when completed, \$11,000; machinery mainly purchased; plant to be in operation by January 1; Harold F. Seymour, assistant general manager, now superintending construction, will be in charge of plant.

Baltimore, Md.—Copper Smelting.—Baltimore Copper Smelting & Rolling Co. has plans for enlargement of plant; will erect permanent structure to replace temporary building recently provided; will enlarge tank house and capacity for electrical refining of copper; will probably increase output from 12 to 15 per cent. Offices, ninth floor of Keyser Bldg., Calvert and German Sts.

Baton Rouge, La.—Cigars.—M. Epstein proposes establishment of cigar factory.

Birmingham, Ala.—Clerkare Manufacturing Co. incorporated with \$20,000 capital stock; H. J. Davis, president and general manager; P. G. Ault, vice-president and secretary; H. W. Coffin, treasurer.

Charlotte, N. C.—Candy.—Southern Candy Co. incorporated with \$10,000 capital stock by J. B. Vreeland, W. W. Haywood and J. K. Porter.

Chattanooga, Tenn.—Jewelry.—Chattanooga Jewelry Co. incorporated with \$15,000 capital stock by S. T. Rice, J. M. Mosier, M. C. Dillon and others.

Chattanooga, Tenn.—Paints, Roofing, etc.—Midland Roofing & Manufacturing Co., Chicago, Ill., proposes organization of company with \$100,000 capital stock to establish plant in Chattanooga for manufacturing paint and roofing.

Clarendon, Ark.—Buttons.—Haley, Chalmers & Sons, Amsterdam, N. Y., have leased plant of Clarendon Button Co. and will operate.

Columbia, S. C.—Mattresses.—A. A. Gage will establish mattress factory; building is being constructed with 3000 feet of floor space; J. A. Minnis will be manager.

Columbia, S. C.—Mattresses.—E. G. Cook of Columbia and Emery P. Stevens, Easton, Md., are interested in organization of company to establish mattress factory. Address E. G. Cook, care of Lion Furniture Co., Columbia.

Cordell, Okla.—Creamery.—Cordell Creamery Co. incorporated with \$7000 capital stock; John R. Pitzer, president; H. D. Young, vice-president; J. J. McCurley, secretary and treasurer.

Covington, Va.—Paper.—West Virginia Pulp & Paper Co. will, it is reported, enlarge paper department, doubling size and capacity.

Elizabeth City, N. C.—Gas Plant.—Fritchum, Lemordin & Peed have applied for franchise to establish gas plant.

Fallston, Md.—Creamery, etc.—Geo. W. Evans will rebuild creamery, barns, etc., recently burned at Salim Farm; mill construction; size of barn not decided; complete creamery equipment will be needed. (See "Machinery Wanted.")

Fort Smith, Ark.—Gas and Electric Appliances, etc.—Pittsburg Supply Co. incorporated with \$50,000 capital stock; E. C. Lichty, president; J. B. Weatherston, vice-president; P. C. Hendricks, secretary and treasurer.

Greensboro, N. C.—Ice-cream and Dairy Products.—C. B. Dorsey, Lynchburg, Va., proposes establishment of cream dairy and ice-cream manufacturing plant in Greensboro.

Honey Grove, Texas.—Creamery.—Commercial Club is promoting the establishment of creamery.

Jacksonville, Fla.—Bottles.—Southern Bottle & Supply Co. incorporated with \$25,000 capital stock; J. E. Henderson, president and general manager; D. A. Deen, secretary and treasurer.

Jennings, La.—Gas.—Southern Heat & Light Co. incorporated with \$100,000 capital stock; F. E. Bliss, president; F. E. Morse, vice-president; George Forest, secretary and treasurer; company will manufacture gas for heating and lighting.

Kansas City, Mo.—Post Cards.—United States Post Card Manufacturing Co. incorporated with \$5000 capital stock by T. I. Moffett, C. K. Bowen, S. D. Butcher and others.

Laurel, Miss.—Paper, etc.—De Soto Naval Stores Co., Chas. E. Heald, president, Lynchburg, Va., will rebuild Laurel naval stores plant recently burned; will rebuild on small scale and enlarge as experience justifies; now manufacturing turpentine, pine oil and rosin. Company advises Manufacturers' Record there is no truth in report it will build paper mill.

Little Rock, Ark.—Trunks and Bags.—Little Rock Trunk & Bag Co., recently reported incorporated, will manufacture trunks and bags; capacity, 20 trunks daily; B. P. Kidd, president; F. E. Russ, secretary; succeeds J. A. Fleimister Company.

Martinsville, Va.—Overalls.—Company has been incorporated with \$25,000 capital stock; J. H. Spencer, president; T. N. Barbour, vice-president; T. J. Coleman, secretary and treasurer; to establish overall factory; plant will begin operations with 30 machines.

Memphis, Tenn.—Perfumery.—Jopling Perfumery Co. incorporated with \$25,000 capital stock; K. C. Jopling, president; W. P. Biggs, vice-president; Ben E. Berry, secretary and treasurer.

Monroe, N. C.—Drugs.—Union Drug Co. incorporated with \$4000 capital stock by C. A. Long, A. M. Seerist and others.

New Orleans, La.—Crackers.—Sim Weis has purchased Pelican Cracker Factory, and will, it is reported, reorganize company to operate.

New Orleans, La.—Brandy, Vinegar, Mince-meat, etc.—International Fruit & Vintage Co., 919 Malson Blanche, has reorganized with \$250,000 capital stock; William Philip Johnston, president; T. W. Jamison, vice-president; W. L. Lafferty, secretary; manufactures brandy, vinegar, wines, banana crisp, mince-meat, candy, oil, etc.; buildings erected; machinery purchased.

Oklahoma City, Okla.—Loading Trucks.—Cheenutt Loading Truck Co., Paul B. Smith, president, 14 North Harvey St., contemplates erection of assembly plant to manufacture trucks; at present is having machines built under contract. (See "Machinery Wanted.")

Rome, Ga.—Turpentine, etc.—Southern Turpentine Co. incorporated with capital stock of \$1,000,000 to manufacture turpentine from pine stumps and timber and to convert chips into wood pulp; contemplates locating 10 plants in different cities, each with 50 cords daily capacity; incorporated by B. F. A. Saylor, E. A. Heard, J. E. Dean and J. D'Arcy, all of Rome, and F. L. Cutting of Asheville, N. C.

Roslyn, Va.—Meats, Fertilizers, etc.—Columbia Cotton Oil and Provision Corporation, George P. Secks president, recently noted to have purchased plant of Virginia Stockyards & Abattoir Co., near Roslyn, will dress, cure and smoke meats, and manufacture canned meats, sausages, meat extracts, mince-meat, fertilizers and chicken feed; abattoir capacity, 15,000 hogs, 600 cattle and 2500 sheep weekly. (See "Cottonseed-oil Mills.")

Roslyn, Va.—Safety Razors.—Finney Adjustable Safety Razor Co. incorporated with \$300,000 capital stock; W. C. Finney, 2304 Q St. N. W., president; E. S. Moore, vice-president; J. W. Moyer, 902 F St. N. W., secretary; R. L. Middleton, treasurer, all of Washington, D. C.

Seminary, Miss.—Paper.—J. W. Burge of Mobile, Ala., and associates will establish plant to manufacture paper from sweet bay (magnolia glauca) pulp; plant to be operated by electric power. (See "Electric-Light and Power Plants.")

Shreveport, La.—Cigars.—Cuban Cigar Factory incorporated with \$10,000 capital stock; Benjamin Freyer, president; Joe Goldberg, vice-president and treasurer; A. B. Freyer, secretary.

St. Louis, Mo.—Women's Apparel.—Superior Manufacturing Co. has increased capital stock from \$6000 to \$25,000.

St. Louis, Mo.—Bottling.—Annheuser-Busch Brewing Co. awarded contract to A. H. Haesler Building & Contracting Co., Wainwright Bldg., St. Louis, at \$16,500, for re-

modeling boiler-house; plans by Widman & Walsh, Wainwright Bldg., St. Louis.

St. Louis, Mo.—Alcohol.—C. M. McDonald Real Estate Co. is seeking site for Eastern capitalists for establishment of plant to manufacture wood alcohol; plant will require two-story building containing at least 15,000 square feet floor space on railroad and with switch privileges; company will lease property with option to buy.

Valrico, Fla.—Artificial Stone.—Valrico Sandstone Co. incorporated with \$20,000 capital stock; R. Cay, president; John Bryce, secretary and treasurer; J. I. Cross, superintendent.

Ybor City, Fla.—Cigars.—Swann-Holtsinger Investment Co. is considering proposition of cigar-manufacturing company to erect three-story brick factory building.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Gadsden, Ala.—Alabama Great Southern Railroad (Queen and Crescent Route), H. E. Warrington, chief engineer, Cincinnati, Ohio, will, it is reported, construct 200-foot extension to main erecting shed; 800 feet long at present; water tank is now under construction.

Little Rock, Ark.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., will, it is reported, complete railroad yards at Hot Springs Junction in accordance with plans outlined over a year ago, when tracklaying was begun; work to be resumed as soon as minor details can be arranged. It is proposed to erect round-house, turntable, coal chute, cinder pits, etc., lay track for repairing of cars, build dump capable of carrying 15 long tracks through the bayou, etc.; name will be changed to Biddle; estimated expenditure, \$150,000.

Temple, Texas.—Gulf, Colorado & Santa Fe Railway, C. F. W. Felt, chief engineer, Galveston, Texas, has adopted plans, drawn contracts and is prepared to begin improvement of properties at Temple. These betterments will include two-story brick passenger station, 40x196 feet, having ticket office, waiting-rooms, etc., upon first floor, and division offices on second floor, to cost \$75,000; freight yards, costing about \$300,000, exclusive of cost of additional land; 15½ miles of tracks will be laid with 65-pound rail, together with ballasting, interlocking signal system, overhead viaducts, drainage, brick culverts, etc.; brick storehouse, 50x200 feet, having concrete basement for handling of oils, etc., to cost \$28,500; additional main track for handling of freight, to cost \$30,000; 46-foot 100-ton track scale, to cost \$3750; yard office, 24x50 feet, to cost \$3500; water and air facilities in new freight yards, with air cleaning plant, water system, etc., to cost \$6500; bridging and drainage, \$1500; additional land to be purchased is estimated to cost \$75,000; total expenditure, \$423,750; estimated that \$15,000 will be expended in moving water tanks and other changes; engineers now surveying for new buildings, freight yards, etc.; grading contracts have been awarded, and it is expected to begin work on buildings within 30 days. (Recently mentioned.)

Yoakum, Texas.—San Antonio & Aransas Pass Railway, J. S. Peter acting general manager, San Antonio, Texas, will, it is reported, construct iron and brass foundry.

ROAD AND STREET IMPROVEMENTS

Charleston, W. Va.—City expects to receive proposals about January 1 for constructing approximately 110,400 square yards of street paving, 47,580 linear feet of curbing and 7340 linear feet of sewer, ranging in diameter from 8 to 42 inches; W. A. Hogue, City Engineer. (See "Street Paving" in "Machinery, etc., Wanted.")

Chattanooga, Tenn.—City will pave 13th (formerly Hooke) street with vitrified brick; bids to be opened December 22; H. F. Van Dusen, chairman Board of Public Works. (See "Machinery Wanted.")

Chattanooga, Tenn.—City will improve Broad street, work to consist in part of new asphalt paving, asphalt resurfacing and brick paving, not including space within and between railroad tracks; bids to be opened December 22; H. F. Van Dusen, chairman Board of Public Works. (See "Machinery Wanted.")

Clinton, Mo.—City Council has advertised for bids for about 4000 square yards of brick paving; Telford base, with sand cushion of 1½ inches; cement grouting. About 17,000 yards more on residence streets are under consideration; metal base of 4 inches, with sand cushion of 1½ inches; prime standard

brick with cement grouting. Paving is in charge of Street and Alley Committee, E. E. Dix, chairman; Hurla Kibbey is engineer; W. H. Shackelford, Mayor, and R. Hellale, city clerk.

Dallas, Texas.—City awarded contract to Texas Bitulithic Co., Carleton H. Wells, general manager, Dallas, for paving Jackson street with vitrified-brick blocks on five-inch gravel-concrete foundation; asphalt filler; bid \$2.23 per square yard.

Dothan, Ala.—Houston county will vote January 4 on issuance of \$100,000 of bonds for road construction. Address County Commissioners.

El Paso, Texas.—El Paso county has voted \$250,000 of bonds for road improvements. Address County Commissioners. (Noted in October.)

El Campo, Texas.—City has voted issuance of \$10,000 of bonds for street improvements, including laying of sidewalks and drainage. Address The Mayor.

Graham, N. C.—Alamance county will probably let contracts about February 1 for construction of macadam roads, for which \$300,000 bond issue was previously reported voted; surveys are being made; Gilbert C. White, Durham, N. C.; engineer, D. A. White, Mebane, N. C., secretary.

Hillsboro, N. C.—Hillsboro township will expend about \$25,000 in construction of macadam road from Hillsboro to southern part of county; Gilbert C. White, Durham, N. C., is preparing plans.

Holdenville, Okla.—City will construct about five miles of concrete sidewalks in residence section. Address The Mayor.

Houston, Texas.—City awarded contract to John C. Underwood of Houston for paving San Jacinto, Preston and Dowling streets.

Humboldt, Tenn.—City will gravel, grade and gutter streets; bids to be opened January 1; N. A. Senter, Mayor. (See "Machinery Wanted.")

Lexington, Ky.—City awarded contract to Carey & Reed of Lexington for paving South Ashland avenue with asphalt; John Skain, Mayor; J. E. Cassidy, City Clerk.

Lexington, Ga.—Oglethorpe county's \$50,000 bond issue for construction and repair of public roads and bridge improvements has been defeated; W. J. Knox, Commissioner of Roads and Revenues. (Recently mentioned.)

Little Rock, Ark.—City Council adopted ordinance appropriating \$10,000 for repairing brick paving on Rock and Scott streets; vitrified street-paving brick to be used; W. R. Duley, Mayor.

Logan, W. Va.—City will open bids December 23 for building, repairing and maintaining for 12 months from completion of road from Logan Laundry to corporate limits of city; road to be of logs, brush, stone and earth, not less than 12 feet wide. Charles Avis, Recorder. (See "Machinery Wanted.")

Mobile, Ala.—Board of Public Works instructed Chief Engineer Smith to prepare plans for municipal asphalt plant to care for asphalt-paved streets of city.

Meridian, Miss.—Lauderdale County Supervisors have authorized construction of five-mile road from Mount Hoary Church to Foster place.

Miami, Fla.—Dade County Commissioners are considering construction of rock roads from Miami to Homestead, Fla., by finishing gaps in main line as it now exists, and also extension of main line of rock road from West Palm Beach to Stuart, Fla.; estimated cost of former is \$1500 per mile, and of latter \$3500 per mile, total cost aggregating \$150,000.

Norfolk, Va.—Board of Control has asked City Council for appropriation of \$7255.41 to continue rebuilding and repairing sidewalks in various sections of the city; W. T. Brooke, City Engineer.

Okmulgee, Okla.—City will pave streets with standard paving bricks; concrete base; bids to be opened December 21; F. Villiers, City Clerk. (See "Machinery Wanted.")

Oklahoma City, Okla.—City awarded contract to M. F. Crawford of Oklahoma City at \$1364 for paving sidewalks in various sections of city.

Pensacola, Fla.—C. H. Turner Construction Co., Pensacola, is only bidder at \$3426 for building road on Palafox street from De Soto to Jordan street, to be constructed of Goulding cinders, according to plans and specifications prepared by City Engineer Thornton. (Recently mentioned.)

Rockville, Md.—Montgomery county awarded contract, it is reported, to Highway Construction Co. (probably of Brunswick, Md.) at about \$8000 for construction of one mile of Shoemaker pike from Chevy Chase Circle to Otterbourne.

San Antonio, Texas.—Sixth Improvement

District will vote January 19 on issuance of \$25,000 of bonds for grading, curbing and macadamizing Greeley, Idaho, Omaha, Montana and other streets. Address The Mayor.

Shawnee, Okla.—City will vote December 28 on issuance of \$125,000 of bonds for street improvements. Address The Mayor.

Sweetwater, Texas.—City will vote on issuance of \$20,000 of bonds for street improvements. Address The Mayor.

Tavara, Fla.—Lake county has postponed election for voting on issuance of \$200,000 of bonds for road construction from December 5 to date to be determined later. Address County Commissioners. (Mentioned in October.)

Texarkana, Texas.—City will vote December 29 on issuance of \$3000 of bonds for completing certain street improvements; A. B. DeLoach, Mayor. (Recently mentioned.)

Tulsa, Okla.—City awarded contract to Cleveland Trinidad Paving Co., Cleveland, Ohio, for paving Denver, Cheyenne and Main streets with asphalt; bid for paving \$2.10 per yard; curbing, 60 cents; total, \$54,680.16; also for brick paving at \$2 per yard; 60 cents for curbing; total, \$10,783.26.

Vicksburg, Miss.—City will pave Clay street with vitrified brick, granite, bitulithic, asphalt or mineral rubber; bids to be opened December 21; P. M. Harding, Mayor. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Ardmore, Okla.—City contemplates installation of septic tanks for sewage disposal. H. H. Sayre, city engineer. (See "Machinery, etc., Wanted.")

Birmingham, Ala.—City Council has prepared two improvement ordinances providing for construction of sanitary sewers. First ordinance calls for estimated expenditure of \$1500 and second for \$15,000; sewers to be of brick masonry, terra-cotta pipe and metal as described in plans and specifications on file in office of Murray Nicholson, City Engineer; H. E. Shropshire, City Clerk; George B. Ward, Mayor. (Recently mentioned.)

Charleston, W. Va.—City expects to receive bids about January 1 for constructing approximately 7340 linear feet of sewer, ranging in diameter from 8 to 42 inches. W. A. Hogue, City Engineer. (See "Road and Street Improvements.")

Clarendon, Texas.—City has voted \$25,000 bond issue for construction of sewer system. Address The Mayor.

Clarksburg, W. Va.—City will vote January 18 on issuance of \$120,000 of bonds for improvements to sewer system and water-works. Address The Mayor.

Covington, Ga.—City awarded contract to General Contracting & Construction Co., Atlanta, Ga., for construction of sewer system and water-works; J. B. McCrary & Co., Empire Bldg., Atlanta, Ga., are engineers. (Recently mentioned.)

Enid, Okla.—City has voted \$125,000 bond issue for sewer construction. Address The Mayor. (Recently mentioned.)

Galveston, Texas.—City will construct reinforced concrete drain on Avenue M from 31st to 43d street, about 4529 linear feet; bids to be opened December 24; A. T. Dickey, City Engineer. (See "Drain Construction" in "Machinery, etc., Wanted.")

Hobart, Okla.—City awarded contract to T. C. Brooks & Son, Jackson, Mich., for extension of sanitary sewer system to the Hill Addition; sewers will be of vitrified tiling; contract price, \$11,945.29; will require 910 feet of 12-inch, 1300 feet of 10-inch and 13,689 feet of 8-inch pipe; 31 manholes and 6 flush tanks; A. F. Hooper, Mayor; O. E. Noble, City Engineer. (Recently mentioned.)

Holdenville, Okla.—City is having plans prepared for construction of sewerage system, to cost about \$20,000. Address The Mayor.

Houston, Texas.—Bids will be opened December 23 for connection of South End sewer lift with sewer; H. B. Rice, Mayor. (See "Machinery Wanted.")

Hugo, Okla.—City will vote on issuance of \$75,000 of bonds for sewer construction. Address The Mayor.

Louisville, Ky.—City awarded contract to Paul & Kerschner, Dayton, Ohio, for construction of 29th-street sewer; expenditure about \$15,000; J. B. F. Breed, chief engineer; Harrison B. Eddy, 14 Beacon St., Boston, Mass., consulting engineer. (Recently mentioned.)

Louisville, Ky.—City will open bids December 23 for construction of Barret-avenue sewer, Contract No. 17, and on December 30 for construction of Hoertz-avenue and Aubin-avenue sewer, Contracts Nos. 18 and 19, of Comprehensive System of Sewerage for

Louisville, mentioned at various times. Contract No. 17 will consist mainly of building concrete sewer of about following lengths: 1125 feet 27-inch, 685 feet 33-inch, 730 feet 63-inch and 680 feet of 39-inch, including about 700 cubic yards of concrete. Contract No. 18, of 3000 feet of concrete sewer, from 24 inches to 5 feet in diameter, maximum depth about 25 feet, and including about 900 cubic yards of concrete. Contract No. 19, of 1540 feet of 24 and 27-inch concrete sewer and laying of 660 feet of 30-inch pipe, including about 325 cubic yards of concrete. P. L. Atherton, chairman of Sewerage Commission, Equitable Bldg.; J. B. F. Breed, chief engineer; Harrison P. Eddy, 14 Beacon St., Boston, Mass., consulting engineer. (See "Machinery Wanted.")

Macon, Ga.—City has made no definite arrangements for extending sewer system into Vineville; City Council will probably consider early in 1909. A. L. Miller, Mayor. (Recently mentioned.)

Muskogee, Okla.—City will open bids December 21 for construction of storm sewers, aggregating \$250,000; L. B. Kinsey, City Engineer. Recently mentioned. (See "Machinery Wanted.")

Oklahoma City, Okla.—City Council approved plans, specifications, profiles and estimates for Maple-street sewer and for extension of Blackwelder sewer; W. C. Burke, City Engineer.

Okmulgee, Okla.—City has voted bond issue of \$100,000 for construction of storm and sanitary sewers, water extensions and city hall. Address The Mayor.

Park Station Knoxville, Tenn.—Sewer Committee will invite bids at once for sewer construction to accommodate schoolhouse, which will be first 10 blocks of sewer system to be constructed; \$15,000 of bonds have been voted (C. W. Crozer, city engineer, recently mentioned to make preliminary surveys).

Roanoke, Va.—City awarded contract to Roanoke Concrete Co. of Roanoke for construction of two terra-cotta sanitary sewers; total cost about \$3500.

Seymour, Texas.—O'Neil Engineering Co., Dallas, Texas, is engineer in charge of sewer construction recently noted; \$12,000 of bonds voted.

Tallapoosa, Ga.—City is considering construction of sanitary sewer system and water-works, and committee in charge (W. H. Kimball, G. A. Barton and A. I. Head) has consulted with J. B. McCrary & Co., engineers, Atlanta, Ga., who have offered to furnish plans and estimates for both systems. (See "Water-works.")

TELEPHONE SYSTEMS

Bello, Texas.—Bello Telephone Co. incorporated by Charles Wild, George C. Rehmet, George C. Milmer and others.

Dillsboro, N. C.—Joseph J. Hooker of Dillsboro and Webster, N. C., will rebuild telephone line from Dillsboro to Webster and Dillsboro to Harris Mine, N. C. (See "Machinery Wanted.")

Oakwood, Okla.—Oakwood Mutual Telephone Co. incorporated by Thomas Conklin, Joseph Hewitt, Carl Heaton and others.

Sherman, Texas.—North Texas Telephone Co. has increased capital stock from \$52,000 to \$60,000.

TEXTILE MILLS

Bonham, Texas.—Sheetings.—Bonham Cotton Mills will expend \$30,000 for additional machinery.

Cuero, Texas.—Sheeting.—Cuero Cotton Mills will, it is reported, double capacity; present equipment, 5000 spindles and 160 looms.

Kansas City, Mo.—Knit Underwear.—Kansas City Knitting Co. organized and will install machinery for knitting underwear; offices at 22d street and Robert Gillham road; officers, Samuel A. and Marshall S. Walker of the Star Knitting Co., Grand Rapids, Mich. (Mentioned in October.)

Laurinburg, N. C.—Cotton Yarns.—J. P. McRae, president of Dickson Cotton Mill and Scotland Mill, is reported as organizing another company to build 15,000-spindle yarn mill.

Merryville, La.—Merryville Telephone Co. organized with \$10,000 capital stock; J. H. Knight, president; B. H. Carroll, vice-president; R. E. Welborn, secretary and treasurer.

Rome, Ga.—Hosiery.—Rome Hosiery Mills will erect mill building, dyehouse and boiler-room, to which present plant will be removed; buildings of mill construction; automatic-sprinkler system; building construction contract awarded to J. F. Dupree of Rome; company now operates 100 knitting machines, dyeing and finishing equipment, etc., on seamless hosiery.

Scotland Neck, N. C.—Underwear, etc.—Scotland Neck Cotton Mills will increase capital stock from \$148,210 to \$250,000; now operating 140 knitting machines, etc.; reported as to expend additional capital for erecting another building and installing machinery to double present capacity.

Seminary, Miss.—John W. Burge, Box 431, Mobile, Ala., purchased Seminary Falls property lately noted; cotton mill not planned. (See "Electric-Light and Power Plants.")

Taylorsville, N. C.—Cotton Goods.—O. L. Hollar of Taylorsville and Fred H. White of Charlotte, N. C., propose organizing \$100,000 stock company to build cotton mill.

Thomaston, Ga.—Cotton Duck, etc.—Thomaston Cotton Mill has, it is reported, engaged O. A. Robbins, Charlotte, N. C., as engineer in charge for erection of addition and installation of 8000 spindles, etc.; carding equipment ordered from Saco & Pettee Machine Shops, Newton Upper Falls, Mass.; spinning frames from Fales & Jenks Machine Co., Pawtucket, R. I. (Lately mentioned.)

Waynesville, N. C.—Cotton Goods.—W. W. Glenn of Gastonia, N. C., is reported as forming company to build cotton mill at Waynesville.

WATER-WORKS

Alvin, Texas.—S. Jones contemplates establishment of water-works. (See "Machinery, etc., Wanted.")

Ardmore, Okla.—City contemplates installation of filtration plant for water-works system; H. H. Sayre, City Engineer. (See "Machinery, etc., Wanted.")

Atlanta, Ga.—Fulton Properties Co. incorporated with \$100,000 capital stock by F. L. Eyles, C. J. Smith and W. P. Bloodworth, to construct water-works, etc.

Beltington, W. Va.—Consumers' Heat, Light, Water & Power Co. increased capital stock from \$60,000 to \$135,000 and will make improvements. (See "Electric-light and Power Plants.")

Booneville, Ark.—City granted 50-year franchise to W. E. Harrell, J. P. Thayer and Joseph Ellercamp for water-works.

Clarksburg, W. Va.—City will vote January 19 on issuance of \$120,000 of bonds for improvements to water-works and sewerage systems. Address The Mayor.

Covington, Ga.—City awarded contract to General Contracting & Construction Co., Atlanta, Ga., for construction of water-works and sewerage system; standpipe work will be awarded separately; J. B. McCrary & Co., Empire Bldg., Atlanta, Ga., are engineers. (Recently mentioned.)

Elm Grove, W. Va.—J. A. Birkett and A. S. Bell have organized company with \$50,000 capital stock to furnish water; will begin construction of reservoir about January 1; after completion of this it is proposed to lay six-inch main to Elm Grove and other points; pressure at Elm Grove will be about 100 pounds to square inch; company controls about 30 springs, producing about 50,000 gallons daily.

Enid, Okla.—City has voted issuance of \$125,000 of water bonds. Address The Mayor. (Recently mentioned.)

Holdenville, Okla.—City is having plans prepared for extension of water mains. Address The Mayor.

Hooker, Okla.—City has, it is reported, voted issuance of \$20,000 of bonds for water-works. Address The Mayor.

Hugo, Okla.—City has accepted preliminary plans and specifications prepared by Hiram Phillips, St. Louis, Mo., consulting engineer, for construction of water-works. Mr. Phillips is now completing plans and specifications in detail, and it is expected that contract for construction of plant will be awarded about January 15; \$150,000 bond issue has been voted.

Kaufman, Texas.—City will extend water mains recently mentioned; will install turbine wheel. Address E. E. Thompson. (See "Machinery Wanted.")

Leesburg, Fla.—City will award five-year contract carrying with it 30-year franchise for water-works and electric-lighting plants; bids to be opened January 5. L. M. Johnson, Clerk. (See "Machinery Wanted.")

Macon, Ga.—Macon Gaslight & Water Co. owns Macon water-works plant, and can be addressed for information relative to furnishing Vineville with water. (Recently mentioned.)

Macon, Mo.—City has voted issuance of \$18,400 of bonds for water-works and electric-light plant. Edward S. Bennett, Macon, is engineer.

Marlow, Okla.—City is considering improvements to water-works and electric-light plant; estimated cost \$10,000. Address The Mayor.

Okmulgee, Okla.—City has voted bond issue of \$100,000 for extension of water mains, construction of storm and sanitary sewers and erection of city hall. Address The Mayor.

Tallapoosa, Ga.—Committee (W. H. Kimball, G. A. Barton and A. I. Head) appointed to consider furnishing adequate water supply for fire protection and domestic use and construction of sanitary sewer system submitted report to City Council; has consulted with J. B. McCrary & Co., engineers, Atlanta, Ga., relative to survey for sewer system and estimates on cost of obtaining water supply; firm offers to furnish plans and estimates for both systems; water may be obtained from either Walker's Creek or Tallapoosa River.

Tonkawa, Okla.—City is having plans prepared by Burns & McDonnell, Scarritt Bldg., Kansas City, Mo., for water-works to cost \$35,000.

WOODWORKING PLANTS

Burnsville, W. Va.—Wagons.—Burnsville Wagon Co. incorporated with \$10,000 capital stock by F. H. Fidler, John I. Bender, W. G. Meadows and others.

Big Stone Gap, Va.—Handles.—Handle company recently mentioned is not fully organized; Wade & Co. are erecting building and will have plant ready for operation about January 1, when organization will be completed.

Cofield, N. C.—Cofield Manufacturing Co. incorporated with \$10,000 capital stock by B. G. Williams and others to operate woodworking and lumber plants.

Columbus, Ga.—Showcases, Office Furniture, etc.—National Showcase Co. will be name of company recently noted incorporated with \$50,000 capital stock to take over Columbus Furniture & Fixture Co.; officers not yet elected; will manufacture showcases, office furniture and fixtures; showcase capacity 50 daily; equipment mainly installed; contemplates ordering few machines after January 1; J. H. Dimon, active manager.

Elkin, N. C.—Furniture.—J. F. Cook Furniture Co. incorporated with \$15,000 capital stock by R. M. Chatham and others.

Greensboro, N. C.—Pulleys and Shaftings. J. S. Kuykendall, secretary of Chamber of Commerce, can give information regarding contemplated establishment of plant for manufacture of wood-split pulleys and shaftings; proposed plant will require two-story building, 300x60 feet, and 100 H. P. boiler and engine, and drykiln with 5000 feet daily capacity.

High Point, N. C.—Chairs.—Tomlinson Chair Manufacturing Co. will erect additional story to storage-house; 50x150 feet.

Lebanon, Tenn.—Spokes & Handles.—Nashville Spoke & Handle Co., Nashville, Tenn., contemplates establishment of spoke and handle factory in Lebanon.

La Grange, Ga.—Furniture, etc.—Pharr Bros. & Co. incorporated with \$10,000 capital stock by R. O. Pharr, E. Z. Pharr and H. H. Childs.

Lebanon, Tenn.—Wagons.—Deeds & Hirsig, Nashville, Tenn., contemplate, it is reported, establishment of wagon factory at Lebanon.

New Orleans, La.—Veneer, Boxes, etc.—Robinson Lumber, Veneer & Box Co., recently reported incorporated, has taken over property of Robinson Lumber, Veneer & Box Co.; C. W. Robinson, president; Robt. G. Robinson, treasurer. (See "Lumber-manufacturing Plants.")

Paint Rock, Ala.—Staves.—Jackson Stave Co. incorporated with \$5000 capital stock by J. A. McGregor, A. A. McGregor and LeRoy McGregor.

Roanoke, Va.—Boxes.—Acme Box & Lumber Co. organized with \$25,000 capital stock; C. R. Swartz, president; W. R. Swett, secretary and treasurer; to establish box factory to be operated in connection with Acme Match Co.; will erect building 60x150 feet; two stories; brick. (Recently mentioned.)

Roanoke, Va.—Matches.—Acme Match Co. building contract, recently noted awarded to C. W. Hancock & Sons, Roanoke, includes erection of five structures—manufacturing building, two stories, 80x165 feet; one-story machine shops and boiler-house, 70x66 feet; one-story chemical building and warehouse, 32x82½ feet; warehouse, 32x72 feet, and main office, 24x32 feet; fireproof reinforced concrete construction throughout; Johnson corrugated bars used for girders, columns, pilasters and beams; triangular wire mesh for slabs and other reinforcement furnished by American Steel & Wire Co., New York; buildings designed by Raeder & Wood, Chicago, Ill., and owned by Acme Building Co. (Other details in previous notices.)

Vanduser, Mo.—Hoops.—Vanduser Hoop & Lumber Co. incorporated with \$3000 capital stock by J. A. Shawhan, W. A. Hamilton, J. A. Patterson and others.

Washington, N. C.—Vehicles.—Washington Buggy Co. has not decided on plans for factory building recently reported to be erected

BURNED

Barboursville, Ky.—Cumberland Ice & Refrigeration Co.'s plant; loss about \$10,000.

Bremond, Texas.—Bremond Drug Co.'s building, loss about \$10,000; John Stachowiak's grocery store, loss \$5000; Stash Lukashavich's saloon, loss \$6,800; Simon & Evans' dry goods store, loss \$4000; J. G. Taylor's three dwellings, loss \$6000; Stachowiak & Co.'s dry goods store, loss \$9000; Avuritt Bros.' grocery store, loss \$8000; F. J. Strugala's saloon, loss about \$15,000.

Briggs, Texas.—Rutledge & Atkinson's cotton gin.

Campit, La.—E. W. Breazeale's drug store; Mrs. E. D. S. Pope's millinery store; loss about \$10,000.

Cleburne, Texas.—Mrs. R. A. Pierce's residence; loss about \$6000.

Commerce, Texas.—Neal & Jernigin's cotton gin; loss about \$6000.

Decatur, Ala.—Riggs & Reese's wood and shuttle factory; loss about \$2500.

Decatur, Ala.—G. S. Hall & Son's store and residence; loss about \$3500.

Dublin, Ga.—Residence occupied by G. H. Williams and owned by Dan G. Hughes, Danville, Ga.; loss about \$6000.

Eddyville, Ky.—Locker Drug Co.'s building.

Fallston, Md.—George W. Evans' barn and creamery building; loss about \$10,000.

Fred, La.—J. J. Law & Son's cotton gin.

Gainesville, Fla.—Packing plant owned and occupied by F. D. Warner and Gainesville Melon-Growers' Association.

Grenada, Miss.—W. E. Conger's residence; loss about \$4000.

Hamilton, Ga.—Fred Miller's residence; loss about \$3500.

Hilltop, W. Va.—West Virginia Industrial School's buildings; loss about \$12,000.

Humboldt, Tenn.—Union Grove school building; loss about \$3000. Address County Commissioners.

Jakin, Ga.—Jakin Naval Stores Co.'s turpentine still; estimated loss \$3000.

Jesup, Ga.—Wilkinson Supply Co.'s store building; loss about \$10,000.

Kansas City, Mo.—Kansas City Hay Co.'s barns, Kansas City Spring Bed Co.'s plant; both buildings owned by Roscoe Reyburn; loss about \$30,000.

Laurel, Miss.—Phil S. Gardner's residence; loss about \$5000.

Moreland, Ga.—E. N. Camp & Sons' machine shop; loss about \$10,000.

Mt. Washington, Md.—M. J. Nolley's barn and carriage-house; loss about \$4000.

Picayune, Miss.—Pearl Land & Lumber Co.'s plant; estimated loss \$20,000.

Pineville, Ky.—A. T. Smith's residence; loss about \$6000.

Pineville, Ky.—Pineville Light & Ice Co.'s light plant and ice factory; loss about \$25,000; R. L. Bowman and D. B. Logan principal stockholders.

San Angelo, Texas.—Wright & Son's cotton gin; loss about \$5000.

Sour Lake, Texas.—Southern Pacific Co.'s depot; loss about \$10,000; W. G. Van Vleck, Houston, Texas, manager of Texas lines.

St. Louis, Mo.—Lohse Patent Door Co.'s plant; loss about \$10,000.

Suffolk, Va.—Gay Manufacturing Co.'s lumber mill, loss about \$35,000; William H. Bosley, president, main office Gitting Bank Bldg., Baltimore, Md.

Sulphur Springs, Texas.—Jail building at County Farm. Address Hopkins County Commissioners.

Torras, La.—L. & S. Sommer's saloon, Coleman & Co.'s store building; loss about \$10,000.

Washington, D. C.—James S. Topham's trunk factory at Eckington place and Q street N. E.; loss about \$9000.

WRECKED BY EXPLOSION

Sanford, Fla.—Celery City Laundry, owned by E. E. Webb; loss about \$6000.

BUILDING NOTES APARTMENT-HOUSES

Augusta, Ga.—Jacob Phinizy awarded contract for erection of four apartment-houses; frame construction; brick foundations; two stories.

Baltimore, Md.—Dr. John Turner, 1314 North Charles St., will build addition to property and convert structure into apart-

ment-house; annex will be three stories, 18x34 feet, and cost about \$2500.

Birmingham, Ala.—Mary P. McNeal, Marion, Ohio, awarded contract to J. E. Westbrook, Birmingham, for erection of two-story brick flats to cost \$5500; ordinary construction; hot-air heat; gas and electric lighting; plans by D. O. Whildin, 711 Title Guarantee Bldg., Birmingham. (Recently noted.)

St. Louis, Mo.—Burdeau Real Estate Co. will erect six apartment-houses; two stories; 25x36 feet; composition roof; iron girders; cost \$14,400; William M. Morris, 1094 South Kingshighway, St. Louis, architect and contractor.

St. Louis, Mo.—Lindell Real Estate Co., 421 Olive St., will erect three apartment-houses; two stories; 25x44 feet each; composition roof; iron girders; hot-water heat; cost \$13,350; August Beckemeier, 3552 Wyoming St., contractor; E. Preisler, 918 Pine St., architect; both of St. Louis.

St. Louis, Mo.—August E. Feldman, 2901 South 7th St., will erect two apartment-houses; 27x53 feet each; two stories; composition roof; galvanized cornices; iron girders; cost \$12,000; Arthur Hess, 3508 Connecticut St., contractor; Frank H. Leibinger, 301 Allen St., architect; both of St. Louis.

St. Louis, Mo.—Heston Investment Co. will erect two-story apartment-house, to cost \$21,000.

BANK AND OFFICE BUILDINGS

Augusta, Ga.—Union Savings Bank is having plans prepared for bank building; two stories; stone and light brick.

Hollis, Okla.—Groves National Bank will erect bank building; work to begin about January 1.

Houston, Texas.—J. E. McAshan will not erect office building as recently reported.

Jacksonville, Fla.—Atlantic National Bank is considering erection of additional story to proposed 10-story building, now in course of erection; to be fireproof; 62½x106 feet; exterior facings of white marble and white impervious glazed terra-cotta; columns and floor girders of steel; steam heat; electric lighting; elevators; vacuum-cleaning system; mail chute, etc.; John Williams of New York has contract for metal work, material to be wrought and cast bronze; George W. Muller Manufacturing Co., Atlanta, Ga., for mahogany cabinet work; Batterson & Elsie, New York, for marble work; James Stewart & Co., Westinghouse Bldg., Pittsburgh, Pa., have general contract; Mowbray & Uffinger, 92 Liberty St., New York, prepared plans. (Full details previously mentioned.)

New Orleans, La.—New Orleans Real Estate, Mortgage & Securities Co. is having plans prepared by DeBuys, Churchill & Labouisse of New Orleans for building on Canal street; five stories; 37x160 feet; mill construction; terra-cotta front.

Oklahoma City, Okla.—Campbell Building will be enlarged by erection of five additional stories; at present four stories high; addition of reinforced concrete, fireproof, and cost about \$40,000. R. S. Roland and Thomas Campbell are interested.

Polkton, N. C.—Bank of Polkton, W. J. McDaniel, president, contemplates erecting bank building.

Richmond, Va.—St. Luke Savings Bank will erect three business buildings; corner to be occupied by bank.

Roanoke, Va.—First National Bank is having plans prepared by John Kevan Peebles, Law Bldg., Norfolk, Va., for bank and office building; seven stories; 100 feet high; steel frame; brick and granite; fireproof; electric elevators; heating plant, specifications for which are not yet completed; site 50x110 feet; estimated cost, \$150,000, not including ground; date of opening bids not decided; J. T. Meadows, vice-president.

San Antonio, Texas.—P. H. Swearingen will open bids in six months for erection of fireproof office building recently mentioned; steel frame; mill construction; cost \$300,000; heating, lighting, etc., not decided; Atlee B. Ayres, architect, 228 West Commerce St., San Antonio.

St. Louis, Mo.—Ernst Preisler of St. Louis is preparing plans for remodeling Westliche Post building as store and office building; structure is four stories high, 43x83 feet; first floor will be divided into storerooms with plate-glass fronts; upper floors will be divided into offices; steam plant will be installed; Bourland Investment Co. is owner; Welsch-Gerhart Real Estate Co. will be manager.

Taylor, Texas.—City National Bank will remodel one-story brick building as bank building.

Washington, D. C.—John F. Donohoe &

Sons, 308 East Capitol St., will improve building at 314 Pennsylvania avenue S. E.; entire front will be remodeled and interior divided into offices; interior trimmed throughout in oak; main offices to have terrazzo floors; plans by Spelden & Spelden, 1403 New York Ave. N. W., Washington.

CHURCHES

Baltimore, Md.—Henry Vaughn, architect, Boston, Mass., has announced plans for Protestant Episcopal Cathedral and buildings for Diocese of Maryland on site of about four acres on University boulevard; general plan calls for pro-cathedral seating about 3000, chapter-house, library building and episcopal residence for Bishop of Maryland; first building will be Church of SS. Barnabas and George, seating capacity about 500, and so constructed that it can eventually be used for convention hall; work will probably begin in spring; cathedral will be of Gothic architecture, constructed of granite and have dark oak interior woodwork finish; this will be last building to be completed; episcopal residence, modified Gothic architecture; library building, Gothic style.

Charlotte, N. C.—Church of the Holy Comforter (Episcopal) awarded contract to J. D. Brown of Charlotte for erection of stone edifice; site has frontage of 159 feet.

Dallas, Texas.—Ross Avenue Christian Church, Rev. Leroy Anderson, pastor, will enlarge and remodel present frame edifice; will be veneered with brick; cost \$3500.

El Reno, Okla.—St. John's Methodist Church, Rev. Mr. Garrett, pastor, contemplates erection of church building.

Gulftport, Miss.—First Baptist Church will erect edifice to cost \$30,000. Address The Pastor, First Baptist Congregation.

Kansas City, Mo.—Ivanhoe Park Congregational Church awarded contract to Hays & Beverfriden, Sheldy Bldg., Kansas City, for erection of edifice 50x103 feet; stone; Old English parish church style; ordinary construction; hot-air heat; electric and gas lighting; estimated cost, \$30,000; plans by Root & Siemens, Scarritt Bldg., Kansas City.

Oklahoma City, Okla.—First Presbyterian Church, Rev. Dr. Phil C. Baird, pastor, contemplates erection of edifice on site 125x140 feet; purchase price of lot to be about \$18,000.

San Antonio, Texas.—First Presbyterian Church awarded contract to J. D. Haynes of San Antonio at \$60,500 for erection of edifice recently mentioned; Gothic architecture; rock; tile roof; interior oak and marble finishing; plans by Atlee B. Ayres of San Antonio.

Shandon, P. O. Columbia, S. C.—Shandon Baptist Church, Rev. Carlie Courtenay, pastor, has had plans prepared by Shand & LaFaye of Columbia for edifice.

Stamford, Texas.—Methodist congregation will erect edifice to cost \$50,000; Rev. R. E. Goodrich is pastor.

St. Louis, Mo.—Evangelical Lutheran Church of Messiah will erect chapel; one story; 42x78 feet; steel girders; furnace heat; cost \$13,000; Victor Architectural & Building Co., 3447 Pestalozzi St., contractor; E. H. A. Volkmann, same address, architect.

Tulsa, Okla.—Christian congregation will erect edifice to cost \$30,000; construction has begun. Address The Pastor, Christian Church.

COURTHOUSES

Mason, Texas.—Mason county contemplates issuing \$40,000 of bonds for erection of courthouse. Address County Commissioners.

Summerville, Ga.—Fall City Construction Co., Louisville, Ky., is proceeding with construction of Chattanooga county courthouse, previously noted; plans by W. L. Lewman, Louisville; fireproof structure; steam heat; lighting not decided; site 110x80 feet; cost \$55,000.

Tallahassee, Fla.—Leon county's courthouse addition, recently mentioned, will be 25x48 feet; brick and stone; fireproof; electric and gas lighting; contract awarded to Dyer & Diehl, Box 198, Tallahassee, at \$7287; plans prepared by O. C. Parker of Tallahassee.

DWELLINGS

Augusta, Ga.—A. H. Story will erect residence.

Baltimore, Md.—J. R. Brattan has had plans prepared by Jacob F. Gerwig, 210 East Lexington St., Baltimore, for four dwellings on Catherine street; two stories; 14½x48 feet; cost about \$9000.

Baltimore, Md.—William F. Lambdin, president of Baltimore Automatic Vending Co., Calvert Bldg., has had plans prepared by Jacob F. Gerwig, 210 East Lexington St.,

Baltimore, for six dwellings on Edmondson avenue; two stories; brick; about 17x63 feet; cost about \$15,000.

Baltimore, Md.—Daniel McLen, recently noted to erect residence, awarded contract to Arthur F. West, 217 South Gilmor St., Baltimore, for construction; dwelling will be three stories; brick; 35 feet 6 inches by 47 feet 10 inches; hardwood floors; slate roof; hot-water heat; electric lights; cost about \$10,000.

Birmingham, Ala.—Mary P. McNeal, Marion, Ohio, will erect \$4000 residence; frame; two stories; hot-air heat; gas and electric lighting; plans by D. O. Whildin, 711 Title Guarantee Bldg., Birmingham; contractor, J. E. Westbrook, Birmingham.

Birmingham, Ala.—J. C. Long awarded contract to H. A. Lockhart, Birmingham, for erection of two-story frame residence; ordinary construction; hot-air heat; gas and electric lighting; cost \$3000.

Birmingham, Ala.—J. Cary Thompson will erect \$6000 residence; double two-story frame; ordinary construction; gas and electric lighting; grates; construction by owner.

Birmingham, Ala.—P. G. Shook awarded contract to C. W. Brown, Birmingham, for construction of foundation for proposed dwelling; plans by Miller & Martin, Birmingham; two stories; stone and half timber; ordinary construction; hot-water heating; electric and gas lighting; cost \$13,000.

Bluefield, W. Va.—James Roles will erect residence to replace burned structure.

Charlotte, N. C.—A. M. McDonald, Walter S. Alexander, Jr., and William Jenkins awarded contract to J. E. Solomon, Charlotte, for erection of three residences; two stories; slate roofs; cost about \$7000.

Chattanooga, Tenn.—D. Herndon Barr, 625 McCallie Ave., is having plans prepared by Daniel A. Reamer, First National Bank Bldg., Chattanooga, for frame and stucco \$4000 bungalow; one and one-half stories and basement; tile shingle roof; plumbing; gas and electric lighting; hot-water heat.

Chattanooga, Tenn.—A. P. Smith, 606 Market St., will erect two two-story brick dwellings to cost \$5000; slate roof; hard pine interior finish; gas and electric lighting; cabinet mantels; plans by D. A. Reamer, First National Bank Bldg., Chattanooga.

Chattanooga, Tenn.—H. H. Embrey, 701 Broad St., is having plans prepared by D. A. Reamer, First National Bank Bldg., for \$2200 residence; two stories; slate roof; hard pine interior finish; gas and electric lighting; cabinet mantels; plumbing.

Chattanooga, Tenn.—A. R. McKenzie, Jr., care of Odorless Refrigerator Co., Chattanooga, will erect \$2500 dwelling at Bungalow place; one-story and basement; frame shingle and stone siding; shingle roof; hard pine interior finish; plumbing; electric wiring; acetylene-gas plant; cement walk; stone wall; owner to commence work January 4.

Chattanooga, Tenn.—M. M. Allison, 609 Oak St., will erect proposed residence at Riverview (suburb); two-story building, with basement and attic; first story, stone; second story, stucco; tile roof; oak and mahogany interior finish; vacuum system vapor heating; tile paving; electric and acetylene-gas lighting; cost \$12,000; plans by Adams & Alsop, James Bldg., Chattanooga; construction by day's work, superintended by architects.

Chattanooga, Tenn.—J. T. Lupton, The Elizabeth, is receiving bids through W. T. Downing, architect, James Bldg., Chattanooga, for reinforced concrete for three floors of \$100,000 residence at Riverview (suburb); contracts for steel work awarded to Converse Bridge Co., Chattanooga; architect superintending entire construction; no general contract. (Previously described.)

Chevy Chase, Md.—Mrs. M. R. Roberts, Washington, D. C., has had plans prepared by Spelden & Spelden, 1403 New York Ave. N. W., Washington, D. C., for residence at Chevy Chase; two stories, basement and attic; frame; exterior to be finished in rough pebble dash; electric lights; large covered porches on three sides supported by Colonial columns; site 70x125 feet; cost about \$7000.

Copenhagen, Tenn.—Dixie Portland Cement Co., James Bldg., Chattanooga, Tenn., is having plans prepared by D. A. Reamer, First National Bank Bldg., Chattanooga, for erection of seven one-story frame and stucco cottages near South Pittsburg, Tenn.; concrete foundations; metal lath; cabinet mantels; hard pine interior finish; plumbing; electric lighting; total cost \$9000.

Dallas, Texas.—R. L. Chapman will erect \$12,000 residence.

Erwin, Tenn.—William Price will erect residence.

Erwin, Tenn.—W. B. McNabb will erect residence.

Erwin, Tenn.—J. S. O'Brien will erect residence.

Erwin, Tenn.—G. E. McLaughlin will erect residence.

Gainesville, Ga.—W. A. Ramseur will award contract before March 1 for erection of frame dwelling recently mentioned; eight rooms and basement; hot-water or steam heat; electric lighting; cost \$4000; architect not yet employed.

Girard, Ala.—J. M. Holt, Auburn, Ala., will erect several dwellings and store building in Girard.

Hagerstown, Md.—Max Reuben will erect residence; three stories; pressed-brick front; cost \$8000.

Hendersonville, N. C.—F. M. Dixon, Box 210, awarded contract to G. Gilreath, Hendersonville, for erection of proposed 10-room residence; cost \$5000; plans by T. J. Thompson, Shelby, N. C.

Johnson City, Tenn.—W. C. Lee awarded contract to Curtis Bros., Johnson City, for erection of proposed \$7000 dwelling; 50x50 feet; two stories; brick veneer; semi-fireproof; steam heat; electric lighting; plans by J. Curtis, Johnson City.

Laurel, Miss.—P. S. Gardiner will have plans prepared by F. Churchill, New Orleans, for \$25,000 residence; to have hot-air heat and electric lighting; contract to be awarded July, 1909.

Lexington, Ky.—First Presbyterian Church awarded contract to Albert Howard, 151 Limestone St., Lexington, for erection of parsonage; 28x40 feet; colonial style; shingle roof; furnace heat; electric and gas lights; cost about \$5000; plans by Martin Guetze, Lexington.

Macon, Ga.—E. P. Frazor will erect residence recently mentioned (under Howard, Ga.); 10-room bungalow; one story; 55x30 feet; acetylene-gas or electric lighting; fireplaces; cost \$4000; plans and construction by owner.

Memphis, Tenn.—Mrs. Julia T. Clark awarded contract to F. C. Story, Memphis, for erection of residence; two stories; brick and stone veneered; nine rooms; slate roof; cost, exclusive of heating and plumbing, \$9000.

Memphis, Tenn.—Mrs. Julia T. Clarke will erect residence; two stories; brick and stone veneered; nine rooms and bath; slate roof; cost, exclusive of heating, wiring and plumbing, \$9000.

New Orleans, La.—William Drago will erect single two-story dwelling; cost \$2500.

New Orleans, La.—Dannemann & Charlton, Ltd., have prepared plans for two-story residence.

New Orleans, La.—C. B. Harrison has had plans prepared by H. H. Roof, 829 Perido St., New Orleans, for residence; 16 rooms; two baths; two toilet-rooms; basement and attic; frame with tile roof; hot-air heat; cost \$3000.

Ocean Springs, Miss.—H. B. Powell awarded contract to John Burr, Ocean Springs, Miss., for erection of residence; two stories; frame; 10 rooms and two baths; hot-air heat; acetylene-gas lighting; plans by H. H. Roof, 829 Perido St., New Orleans, La.

Orange, Texas.—Catholic congregation will erect rectory; two stories; eight rooms; cost about \$15,000. Address Pastor Catholic Church.

Richmond, Va.—C. F. Seigle will erect detached brick dwelling; cost \$5000.

Richmond, Va.—Davis Land Co. Incorporated by C. W. & J. Lee Davis for erection of about 75 dwellings.

Rome, Ga.—F. H. Schlappach will erect residence.

San Angelo, Texas.—Frank Marberger, Bastrop, Texas, will erect residence in San Angelo; two stories; 50x190 feet.

San Marcos, Texas.—South Texas Normal School is having plans prepared by D. K. Bousley, San Marcos, for principal's residence; cost about \$4500.

Shawsville, Va.—D. H. Barger is having plans prepared by H. M. Miller, Southwest Virginia Trust Bldg., Roanoke, Va., for alterations and additions to residence; colonial style; brick walls; hot-water heating; electric and gas lighting; asbestos-shingle roof; modern plumbing; cost of improvements, about \$9000.

St. Louis, Mo.—Amatus Investment Co., incorporated with \$10,000 capital stock by Amadee J. Taussig to erect residence in Cabanne; 15 rooms; site 85x320 feet; cost \$15,000.

St. Louis, Mo.—A. M. Langenberg awarded contract to A. H. Haesler Building & Con-

tracting Co., Wainwright Bldg., St. Louis, for erection of residence; three stories; 60x48 feet; composition roof; hot-water heat; cost \$24,000; plans by Mariner & LeBaume, Chemical Bldg., St. Louis.

St. Louis, Mo.—Heston Investment Co. will erect two-story residence, to cost \$5000.

Summerville, Ga.—Ed A. Frank will erect residence.

Tampa, Fla.—Celestino Vega, recently noted to award contract to Bates & Hudnall, Tampa, for erection of residence, will erect structure 35x60 feet; circle verandas; brick cellar 16x24 feet; wood with asbestos-shingle roof; steam heat; gas and electric lights; cost about \$12,000; plans by Fred J. James, Tampa.

Vicksburg, Miss.—D. J. Shienker awarded contract to H. H. Havis, Vicksburg, for erection of residence; two stories and basement; tile roof; cost \$12,000; plans prepared by Keenan & Weiss, New Orleans, La.

Washington, D. C.—C. L. Davis will erect two dwellings at 835 and 839 Rittenhouse street N. W.; two stories; cost \$3500 each.

Winston-Salem, N. C.—Chas. S. Siewers has purchased site 140x315 feet, and will erect residence.

Yonkum, Texas.—Mrs. H. L. Lowery will erect residence.

GOVERNMENT AND STATE BUILDINGS

Fort Myer, Va.—Stable.—Bids will be received at office of Capt. B. B. Hyer, Constructing Quartermaster, until January 6 for construction of veterinary stable; certified check or surety company's guarantee for 10 per cent. of amount of bid; plans and specifications furnished on application; deposit of \$5 to accompany request.

Jackson, Miss.—Postoffice and Courthouse. H. A. Bishop, Continental National Bank Bldg., Chicago, Ill., is lowest bidder for erection of proposed U. S. postoffice and courthouse; plans by Jas. Knox Taylor, Treasury Department, Washington, D. C.; building to be 40 feet square; ordinary fireproof construction; three stories; steam heat; freight elevators; cost \$40,000.

Jessups, Md.—Building.—Trustees House of Correction, W. E. Lankford, superintendent, will probably consider erection of another building; increased water supply is now being installed at a cost of about \$20,000.

HOTELS

Baltimore, Md.—Charles A. Flack, 1423 Patterson Ave., awarded contract to J. Henry Miller, 110-112 Dover St., Baltimore, for erection of hotel and restaurant at 1423 Patterson Park avenue; two stories; ornamental buff brick exterior; 15x54 feet; cost \$4000; plans by Henry Krone, 2811 York Rd.

Baltimore, Md.—Hugh Gelston Estate, Safe Deposit & Trust Co., 13 South St., trustee, will expend \$35,000 to enlarge Hotel Raleigh; will build two additional stories; 60 rooms; numerous baths.

Kansas City, Mo.—Dr. Howard S. Lowry will erect hotel; three stories; 100x50 feet; brick; stores on first floor and hotel on upper floors; cost about \$20,000; I. Pomerantz of Kansas City is architect.

Lexington, Ky.—Mooney & Klair, proprietors of Leland Hotel, contemplate, it is reported, erection of nine-story hotel.

Lookout Mountain, Tenn.—Chattanooga-Lookout Mountain Hotel Co. will be incorporated with \$100,000 capital stock by C. A. Lyerly, Charles T. Alexander, N. H. Grady and others, all of Chattanooga, Tenn., to rebuild Lookout Inn, recently burned. (Lately mentioned.)

Nowata, Okla.—Nowata Hotel Co. incorporated with \$40,000 capital stock; L. A. Keys, president; W. A. Davis, vice-president; W. V. Thraves, secretary; W. G. Sawyer, treasurer.

Oklahoma City, Okla.—Lee Huckins Hotel Co. awarded contract to Selden-Breck Construction Co., St. Louis, Mo., for erection of hotel and office building combined; south half of building to be used for hotel and connected with present seven-story annex by arcades on each floor; new building to be 10 stories; will consist of two wings, with light court between; contain 15 offices; 19 hotel rooms on every floor above second; 172 sleeping-rooms; making total of 273 in entire building; 133 rooms to have baths attached; lobby on ground floor to be 110x40 feet; tenth floor to have convention hall 75x40 feet; four electric elevators; cost about \$300,000; construction has begun. (Mentioned in August.)

Pensacola, Fla.—Pensacola Hotel Co. has extended time for receiving general esti-

mates on eight-story fireproof hotel building from December 16 to December 21; bids are being received at office of F. F. Bingham, secretary; plans and specifications on file at Chamber of Commerce, Pensacola, or at office of architect, W. L. Stoddard, 31 Union Square, New York; certified check for 3 per cent. of amount of bid; blank proposal forms, drawings and specifications for exclusive use of bidders obtained only upon written request or telegraph application, accompanied by cash or draft deposit of \$25, to architect above mentioned; plans and specifications for use of sub-bidders on file as above noted. (Recently mentioned.)

Temple, Texas.—Harvey House will be enlarged and improved. Address the proprietor.

Sapulpa, Okla.—P. B. France will erect 50-room hotel, to cost \$25,000; will contain bank offices.

Virginia Beach, Va.—Princess Anne Hotel Co. has, it is reported, had plans prepared for hotel to replace Princess Anne hotel; structure to be of concrete, fireproof, and contain about 200 rooms.

MISCELLANEOUS STRUCTURES

Asheville, N. C.—Clubhouse.—The Golf Club will erect clubhouse to cost about \$6000.

Atlanta, Ga.—Clubhouse.—Boys' Club proposes erection of \$50,000 clubhouse; George C. Dorr, superintendent.

Austin, Texas.—Clubhouse.—Austin Saenger-runde will erect clubhouse to cost about \$20,000; George P. Assman, president.

Baltimore, Md.—Wagon Shed.—Charles W. Duff awarded contract to J. J. Walsh & Son, 1533 Maryland Ave., Baltimore, for erection of wagon shed at 831 West Saratoga street; one story; brick; slag roof; 28x100 feet; cost about \$3000; plans by John K. Stack, 12 East Lexington St., Baltimore.

Baltimore, Md.—Stable.—E. L. Harner, 4 West Pratt St., awarded contract to W. H. Wingate, Baltimore, for erection of stable at 1723 Lamont avenue; 32x200 feet; brick; two stories; slag roof; cost about \$3000.

Baltimore, Md.—Playground.—Hebrew Educational Society, 125 Alquist St., awarded contract to Israel Silberstein, 1401 McEldredge St., Baltimore, for erection of addition to be used as playground; 25x50 feet; three stories; iron; slag roof; cost about \$4000; plans by Louis Levi, American Bldg., Baltimore.

Batesville, Ark.—Trustee of Odd Fellows' Orphans' Home contemplates erection of addition to cost \$20,000.

Beaumont, Texas.—Clubhouse.—Women's Reading Club has had plans prepared by Smith McDonald & Co., Beaumont, for clubhouse; frame; mission style; asbestos shingle roofing; 54x30 feet; cost about \$7000.

Birmingham, Ala.—Store Building.—D. M. Dreunen will erect department-store building; five stories; steel-frame construction; cost about \$300,000.

Birmingham, Ala.—Clubhouse.—Shades Valley Country Club Land Co. organized, with D. M. Dreunen, president; Steve Smith, treasurer; G. T. Brazelton, secretary; will erect clubhouse.

Charleston, S. C.—Academy of Our Lady of Mercy is having plans prepared for convent building; addition is also being erected to St. Catherine's convent; three stories; brick.

Chattanooga, Tenn.—Store.—Mrs. C. H. Holland, 243 East Main St., Chattanooga, awarded contract to J. C. Seiffert, 225 McMillan Ave., Orange Grove, Tenn., for erection of \$3500 store building; two stories; brick; composition roof; size 22x100 feet; front and interior mahogany finish; plate-glass windows; tile floor in store; offices on second floor; cabinet mantels; electric and gas lighting; plumbing; to be occupied by Chattanooga Drug Co., 243 East Main St.

Chattanooga, Tenn.—Mercantile Building.—Stone Fort Land Co. awarded contract to H. L. Westcott, Chamberlain Bldg., Chattanooga, for brick work, and to Converse Bridge Co., Chattanooga, for steel work on \$40,000 building recently mentioned; five stories and basement; contracts also awarded for lumber, steam-heating plant, plumbing and elevators; building to be occupied by Knox Bros. & Thomas, wholesale hat-ters; W. T. Downing, architect, James Bldg., Chattanooga.

Dallas, Texas.—Business Building.—J. S. Terry will erect one-story brick business building, to cost \$8000.

El Paso, Texas.—County Jail.—El Paso county has voted \$25,000 of bonds for erection of addition to county jail. Address County Commissioners. (Mentioned in October.)

Florence, Ala.—Elks' Home.—B. P. O. Elks

will, it is reported, expend \$4500 for improvements to lodge building.

Fort Worth, Texas.—Store.—J. F. Moore awarded contract to Eldridge & Gilmartin for erection of \$4000 store building recently mentioned; two stories; 25x97 feet; plans by L. B. Weiman, Fort Worth.

Girard, Ala.—Store and Dwelling.—J. M. Holt, Auburn, Ala., will erect store building and several dwellings in Girard.

Greensboro, N. C.—Y. W. C. A. Building.—Young Woman's Christian Association will erect association building to cost about \$25,000.

Greensboro, N. C.—Greenhouses.—J. Van Lindley Nursery Co., Pomona, N. C., has not yet prepared plans for four additional greenhouses recently mentioned; will be erected in spring; cost, with other improvements, about \$5000.

Gulfport, Miss.—Stores.—J. H. Woodson, Box 684, will erect drug store and general merchandise building to replace structure recently reported burned; ordinary construction; two stories; frame; 50x60 feet; cost about \$3000; bids opened in January.

Hallsville, W. Va.—Skating Rink.—Davy Amusement Co. incorporated with \$5000 capital stock by M. J. Riley, P. J. Riley, George Morton and others.

Houston, Texas.—Clubhouse.—Houston Launch Club will erect \$5000 clubhouse.

Kansas City, Mo.—Louis Curtiss has prepared plans for business building; three stories; reinforced concrete; 46x115 feet; cost \$20,000.

Lafayette, Ga.—Jail.—Manly Jail Works, Dalton, Ga., has received contract for construction of proposed steel work in Walker county jail.

Memphis, Tenn.—Store Building.—George E. Witt awarded contract to B. F. Johnson & Son, Memphis, for erection of store building; three stories; brick; improved sprinkler and ventilating system; cost about \$15,000; plans by A. A. Chighizola, Memphis.

Mobile, Ala.—Store.—Cleveland Bros. are owners of building recently noted to be erected for Merchants' Grocery Co.; four-story structure; 45x90 feet; cost \$5000; contract awarded to Jett Bros. Contracting Co., Mobile.

Mt. Pleasant, Texas.—Business Buildings.—W. A. Dillard will erect business building, to be occupied by T. F. Elkins; one story; brick; 30x90 feet.

Nashville, Tenn.—Sanitarium.—City View Sanitarium incorporated with \$3000 capital stock by B. F. Lester, J. W. Stevens and Caroline Lester.

New Orleans, La.—Store Building.—U. Marinoni will erect store building; three stories; brick; cost \$10,800. (Mentioned in November.)

Norfolk, Va.—Business Building.—Whichard Realty Corporation, recently reported incorporated, has had plans prepared by B. F. Mitchell, Norfolk, for business building for Whichard Bros. Company, wholesale dry goods; four stories; 40x100 feet; terra-cotta trimmings; mill or reinforced concrete construction; metal window frames; wired glass; electric freight elevator; separate fireproof tower; hot-water heat; cost \$15,000 to \$20,000; plans to be ready and bids asked within few days.

Port Lavaca, Texas.—Business Building.—W. P. Regan will erect brick business building.

Port Lavaca, Texas.—Business Building.—Willett Wilson will erect brick business building.

Port Lavaca, Texas.—Business Building.—P. H. Kurtz will erect brick business building.

Portsmouth, Va.—Business Building.—R. L. Martin awarded contract to W. L. Walker, Portsmouth, for erection of business building; stucco; slate roof; cost \$4500.

Reidsville, N. C.—Store Buildings.—Sam Fels will award contract for erection of block of store buildings.

Snyder, Okla.—Store Building.—Stofer Mercantile Co. will erect brick store building; frontage 75 feet; construction has begun.

Starke, Fla.—Store Buildings.—Chas. F. Pace will erect structure containing five storerooms.

St. Louis, Mo.—Mercantile Building.—Abernon Realty & Investment Co. incorporated with \$94,500 by Peyton T. Carr, A. C. Carr, Fletcher R. Harris and John C. Carter to erect mercantile building.

St. Louis, Mo.—Business Building.—Barada Glio Real Estate Co. will erect either six-story building or office building; site 104x300 feet.

Strawn, Texas.—Drug Store.—Geo. J. Watson has not let contract for erection of drug

store recently mentioned; to be 50x50 feet; electric lighting; cost \$6000; plans by Mr. King, Dallas, Texas.

Sulphur Springs, Texas.—Jail.—Hopkins county will rebuild jail buildings reported destroyed by fire. Address County Commissioners.

Tampa, Fla.—Store Building.—Hubert Smith will erect two-story store building.

Temple, Texas.—Railroad Y. M. C. A.—Gulf, Colorado & Santa Fe Railway, C. E. W. Felt, chief engineer, Galveston, Texas, is interested in improvement of railroad Y. M. C. A. at Temple at cost of about \$12,500.

Terrell, Texas.—Hospital Annex.—North Texas Hospital for Insane awarded contract to Hughes & O'Rourke Construction Co., Dallas, Texas, for repairs to annex, reported damaged by fire in October; ordinary brick construction; electric lighting; steam heat; cost of repairs \$18,000; plans by C. A. Gill & Son.

Tulsa, Okla.—Garage.—W. H. Rorser will erect \$5000 garage; plans by Moore & Hugenin, Tulsa; structure 38x40 feet; Carthage stone; tile roof; ordinary construction; will install turntable, gasoline pump and recharger. (See "Machinery Wanted.")

Washington, D. C.—Store Building.—Eldridge Jordan of Washington, owner, will expend \$30,000 in erection of building recently mentioned; four-story fireproof structure, with steam heat and electric lighting; combination passenger and freight electric elevators; plans by B. Stanley Simmons, 931 F St. N. W.; to be occupied by O. J. DeMoll & Co., dealers in pianos, etc.

Waycross, Ga.—County Jail.—Pauly Jail Building Co., St. Louis, Mo., is consulting with Ware County Commissioners and Jail Committee regarding construction of county jail in Waycross.

MUNICIPAL BUILDINGS

Atlanta, Ga.—Library.—Carnegie Library Building and Ground Committee accepted plans and specifications prepared by Whitfield & King of New York for proposed Luckie-street branch library; one story and basement; Southern colonial style; exterior of brick covered with stucco; marble and wood trimmings; flooring to be of chestnut or ash; auditorium in basement; cost \$15,000; architects will soon receive bids from contractors; \$30,000 has been donated for branch library purposes in Atlanta, and remaining \$15,000 will be expended in erection of second branch library, to be undertaken as soon as first branch is completed.

Alexandria, La.—City Hall.—W. B. Turner, Mayor, and Board of Aldermen, Alexandria, La., will receive bids until December 28 for erection of City Hall in accordance with plans and specifications of George R. Mann, architect, Little Rock, Ark., which may be seen at office of architect or of Mayor; certified check for \$500, payable to order of H. B. Chase, treasurer.

Charlotte, N. C.—Fire Station.—City awarded contract to J. A. Jones of Charlotte for erection of fire station in Dilworth; brick; 40x50 feet; two stories; ordinary construction; cost about \$3000; plans by Wheeler, Gallier & Stern of Charlotte. (Recently mentioned.)

Lynchburg, Va.—City Hall.—Common Council adopted resolution providing for joint committee to secure plans and bids for City Hall, to cost not more than \$150,000. H. L. Shaner, city engineer.

Norfolk, Va.—Engine-house.—R. F. McLaughlin, fire chief, has drawn plans for engine-house on Granby street, and will ask City Council for appropriation; estimated cost, \$25,000.

Okmulgee, Okla.—City Hall.—City has voted issuance of \$100,000 of bonds for erection of city hall, etc. (See "Water-works.") Address The Mayor.

Sapulpa, Okla.—City Hall, etc.—City Council has selected H. C. Lawler of Sapulpa as architect for City Hall, fire department and jail, to cost \$15,000. (Recently mentioned.)

St. Louis, Mo.—Poorhouse.—City awarded contract to Hoosac Building & Construction Co. of St. Louis at \$29,880 for fireproofing and reconstruction of west wing of municipal poorhouse.

St. Louis, Mo.—Library.—Public Library Board awarded contract to J. W. Wilson & Son of St. Louis at \$50,949 for erection of Souldard branch library; one story and basement; wood and stone; granite base; main floor to be in one room with shelf capacity of 18,000 books; basement to contain auditorium with seating capacity of 400; plans prepared by Hellmuth & Spiering of St. Louis. This is the fifth branch Carnegie library to be erected in St. Louis. Plans for the sixth branch, to be located at 14th and

Farrar streets, are being prepared by Marlner & LeBeaume, and contract will probably be awarded in February. General plans provide for erection of central library, now in course of construction, and seven branches. No arrangements have yet been made for the seventh. (Recently mentioned.)

Sweetwater, Texas—Fire Station and City Hall.—City will vote on issuance of \$4000 of bonds for erection of fire station and city hall. Address The Mayor.

Texarkana, Texas—Jail and Fire Station.—City will vote December 29 on issuance of \$5500 of bonds for city jail and \$2500 for fire station; A. B. DeLoach, Mayor.

Vinita, Okla.—City Hall, etc.—City has not made arrangements for utilizing auditorium property, for purchase of which city was recently reported to vote on issuance of \$9000 bonds; will probably be city hall, etc. Address The Mayor.

RAILWAY STATIONS

Amarillo, Texas.—Chicago, Rock Island & Gulf Railway, C. M. Case, chief engineer, Fort Worth, Texas, has had plans prepared by Lang & Wittich, Dallas, Texas, for passenger depot and division offices; two stories; steam heat; estimated cost \$15,000; all materials purchased; Texas Building Co., Fort Worth, Texas, is contractor. (Recently mentioned.)

Crisfield, Md.—New York, Philadelphia & Norfolk Railroad, W. A. Patton, president, 26 South 15th St., Philadelphia, Pa., will, it is reported, improve depot and dock at Crisfield.

Dallas, Texas.—Dallas Terminal Railway & Union Depot Co. will erect union depot, including freight terminal, train sheds and trackage, expending between \$1,500,000 and \$2,500,000; W. C. Connor is president. C. F. W. Felt, Galveston, Texas, chief engineer of Gulf, Colorado & Santa Fe Railroad, telegraphs the Manufacturers' Record that final plans have not been prepared or accepted.

Princeton, W. Va.—Virginian Railway, H. Fernstrom, chief engineer, Norfolk, Va., awarded contract to A. M. Walkup, Richmond, Va., for erection of depot recently mentioned; two stories; 30 feet wide, 90 feet long; frame; first floor for depot purposes; second floor for division offices; ordinary construction.

Tampa, Fla.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., purchased site on which, it is reported, it contemplates erection of freight depot.

Temple, Texas.—Gulf, Colorado & Santa Fe Railway, C. F. W. Felt, chief engineer, Galveston, Texas, has adopted general plans and expects to soon begin erection of passenger station at Temple, recently mentioned; two stories; brick; 40x196 feet; ticket office, waiting-rooms, etc., upon first floor and division offices on second floor; cost \$75,000. (See "Railway Shops, Terminals, Round-houses, etc.")

SCHOOLS

Brunswick, Ga.—Simons-Mayrant Company, Charleston, S. C., at \$37,915, has contract for erection and completion, including heating and plumbing, of school building at Brunswick; two stories; brick, trimmed with stone, faced with pressed brick; large stone columns on front; plans by J. F. Leitner, Wilmington, N. C. (Recently mentioned.)

Catonsville, Md.—Baltimore County Commissioners, Towson, Md., are having plans prepared by Edward C. Jones, 410 West Saratoga St., Baltimore, Md., for school building on Frederick avenue, Catonsville; three stories; brick with stone trimmings; steam heat; electric wiring; marble and terrazzo work; cost about \$40,000. (Recently mentioned.)

College Station, Texas.—Agricultural and Mechanical College awarded contract to J. S. Harrison, Waco, Texas, at \$55,000 for erection of engineering building; mentioned in October; fireproof; brick; inside walls plaster on metal lath; reinforced concrete floors; gravel-covered roof; plans by F. E. Gieske, college architect, College Station.

Danville, Va.—City will appropriate \$40,000 for erection of school building on Holbrook avenue, recently mentioned; 16 rooms and assembly hall; brick or concrete and brick. Address The Mayor.

Erwin, Tenn.—S. Tindle, Harriman, Tenn., is having plans prepared by M. E. Parmelee, Knoxville, Tenn., for proposed college building at Erwin.

Graham, Texas.—Bids will be opened December 20 for erection of brick school building; certified check for 3 per cent. amount of bid; plans and specifications on file at offices of Lang & Wittich, Dallas, Texas, or of R. V. Tidwell, Graham.

Hilltop, W. Va.—West Virginia Industrial School will rebuild structures reported destroyed by fire; loss about \$12,000.

Hollis, Okla.—City will vote on \$30,000 bond issue to replace high-school building destroyed by fire. Address The Mayor.

Iva, S. C.—Bids will be opened January 8 for erection of proposed brick school building; certified check for \$500; plans and specifications on file at offices of J. H. Casey, architect, Anderson, S. C., or of W. F. McGee, secretary, Iva. (Ten-thousand-dollar bond issue noted in October.)

Moorehead, Miss.—City has voted \$10,000 of bonds for erection of school building. Address The Mayor. (Recently mentioned.)

Mounds, Okla.—Bids will be opened January 15 for erection of eight-room brick school building at Mounds; plans and specifications on file at office of W. H. Bierly, clerk of Board of Education, Mounds.

Oklahoma City, Okla.—Bids will be opened December 23 for erection of two-story-and-basement fireproof school building; certified check for 5 per cent. amount of bid; plans and specifications on file at offices of Layton & Smith, architects, 225½ W. Grand St., Oklahoma City; or at rooms of Board of Education, India Temple, Oklahoma City; or can be had on deposit of \$25.

Oklahoma City, Okla.—Bids will be opened December 21 for erection of 8-room fireproof school building; certified check for 5 per cent. amount of bid; plans and specifications on file at offices of E. Condy & Co., 132½ W. Main St., Oklahoma City, or of Board of Education, India Temple, Oklahoma City.

Oklahoma City, Okla.—Bids will be opened December 23 for erection of school building in Putnam Heights Addition; certified check for 5 per cent. amount of bid; plans and specifications on file at offices of G. W. Van Meter, Suite 12, Chamber of Commerce Bldg., Oklahoma City, or of Gus A. Elbow, secretary, Board of Education, India Temple, Oklahoma City.

Oklmulgee, Okla.—City has voted \$55,000 bond issue for erection of schools. Address The Mayor.

Palacios, Texas.—Palacios Baptist College, M. M. Wolff president, is having plans prepared by Frank S. Glover, Houston, Texas, for school building at Palacios; brick; mission style; cost \$40,000.

Rosie, Ark.—Bids will be opened December 20 for erection of school building; plans and specifications on file at offices of Wyatt & Co., architects, Rosie, or of S. W. Williams, secretary Board of School Directors, Rosie.

Slidell, La.—City is having plans prepared by Drago & Smith, Baton Rouge, La., for brick school building to cost about \$20,000; mill construction; steam heat; electric lighting.

Stillwater, Okla.—Bids will be opened January 8 for erection complete of boys' dormitory at Oklahoma Agricultural Mechanical College, Stillwater; plans and specifications on deposit of certified check for \$10, payable to board of regents of said college. Address W. A. Etherton, Stillwater.

St. Louis, Mo.—City awarded contract to Walls Bros. of St. Louis, at \$175,832, for erection of proposed Humboldt School; 36 rooms, including 19 classrooms, two play-rooms and two gymnasiums; one-story auditorium for graduating exercises and entertainments in central front with seating capacity of 700; towers for ventilation; in upper portions of towers will be windows facing every direction, creating a draft as in chimneys, drawing impure air from rooms opening into towers.

Texarkana, Texas.—City will vote December 29 on \$125,000 bond issue for school improvements. Address The Mayor.

Wauchula, Fla.—City has voted \$15,000 of bonds for erection of school building. Address The Mayor.

THEATERS

Baltimore, Md.—Pearce & Scheck, 223 North Calvert St., will expend about \$15,000 in remodeling building at northeast corner Baltimore and Holiday streets as moving-picture theater; fireproof; electrical work; new front; bidders include Henry L. Maas, 906 Alsquith St.; John Cowan, 108 West Madison St.; R. B. Mason, 324 West Biddle St.; bids are in. (Recently mentioned.)

Baltimore, Md.—Jones Bros., 1105 Light St., will remodel two-story brick dwelling at 814 Light street as moving-picture theater; exterior to be of artistic metal design; seating capacity about 500; cost \$3000; Henry Pierson & Sons, 1000 Olive St., Baltimore, are contractors.

San Angelo, Texas.—S. S. Prince, owner of Theaterium, contemplates, it is reported, erection of theater.

San Marcos, Texas.—Stock company will build opera house; contemplated to erect \$20,000 building; stucco; seating capacity, 900; to have first floor, gallery and balcony; hot-air heating; electrical equipment; auditorium 50x65 feet, stage 60x35 feet, with 58 feet to rigging loft; construction will probably be commenced in January. Address Mr. Young, care T. C. Johnson, secretary, Commercial Club.

WAREHOUSES

Baltimore, Md.—Terminal Warehouse Co., Robert H. Powell, president, Pleasant and Davis Sts., awarded contract to J. Henry Miller, 110 Dover St., Baltimore, for erection of addition to warehouses at Monument, Constitution and Front streets; four stories and basement; 140x150 feet; floor space about 90,000 square feet; structural steel frame; concrete foundations; metal siding; steam heat; electric wiring; fireproof floors; delivery platform 420 feet long; three electric elevators; automatic sprinklers; to be used for storing machinery and other heavy goods; estimated total cost, \$200,000; plans prepared by Owens & Sisco, 1605 Continental Bldg., with Charles L. Reeder, 919-921 Equitable Bldg., as consulting engineer. (Lately mentioned.)

Baltimore, Md.—Bids for removing present buildings and constructing State Tobacco Warehouse at Conway, Charles and Light streets will be received at office of Baldwin & Pennington, architects, Professional Bldg., Baltimore. Contractors proposing to bid will file with architects' office their application for drawings and specifications on or before December 29; applicants will be notified after that day when drawings and specifications can be obtained; special deposit of \$50 to be made by parties receiving each set of drawings and specifications; all proposals to be submitted within two weeks from date upon which drawings, etc., are issued, and be accompanied by certified check for \$3000, payable to State Treasurer. Building will be six stories; frontage on Conway street, 317 feet, and on Charles and Light streets, 84 feet each; to be divided into three sections, separated by brick walls; in center section on first floor offices, etc., will be provided, and presses and scales for inspecting, pressing, weighing and general handling of tobacco will be installed; in center of each section will be elevator; second floor will have room about 800 square feet, requested by Maryland Tobacco Growers' Association; remaining parts of building will be arranged for storing and handling tobacco; structure will be fireproof throughout, with brick walls, steel columns, girders and roof construction, reinforced concrete floors, roof, etc.; exterior to be of red brick, with granite base and trimmings; driveway will extend through building from east to west.

Elm Grove, W. Va.—Elm Grove Supply & Construction Co. will erect addition to building, to be used for storage and manufacture of cement blocks.

Hagerstown, Md.—Edward W. Ditto contemplates erecting warehouse.

Houston, Texas.—Erie City Iron Works, Erie, Pa., has had plans prepared by S. L. Green of Houston for warehouse; 100x255 feet; one-story; total estimated cost \$25,000; contract awarded to C. C. Wenzel of Houston, as recently stated; H. A. Paine is company's local representative.

Lexington, Ky.—Bluegrass Tobacco Co., W. J. Loughbridge, president, is having plans prepared for tobacco warehouse; 125x250 feet; cost about \$20,000; to be equipped for machinery for drying and rehandling tobacco.

McComb, Miss.—Farmers' Union Warehouse Co. organized with \$10,000 capital stock; will erect warehouse, 70x100 feet, of iron and brick.

Memphis, Tenn.—Mrs. A. J. Hogson, Waukesha, Wis., authorized Napoleon Hill of Memphis to have plans prepared by Hanker & Cairns, Memphis, for warehouse; two stories and basement; brick; first floor to be divided into two stores; basement and upper floor to be used for storage purposes; steam heat; electric elevators; cost about \$20,000.

Mobile, Ala.—Alabama Docks & Terminal Co. has elected Louis Donald president and J. H. Robertson vice-president; will erect fireproof warehouse, etc.; T. W. Nicol of Mobile will be constructing engineer. (See "Miscellaneous Construction Work.")

Nocona, Texas.—Nocona Farmers' Union Warehouse Co. incorporated with \$5000 capital stock by H. A. Reynolds, J. T. Haralson, R. L. Cubine and J. A. W. McCrew.

Paducah, Ky.—Thomas Hodge, Henderson, Ky., and others contemplate, it is reported, erection of warehouse at Paducah.

Richmond, Va.—Virginia Bonded Warehouse Corporation incorporated with \$50,000 capital stock; F. N. Scarborough, president; Walter

Scott, vice-president; H. F. Hotchkiss, secretary-treasurer.

Vidalia, La.—Simms Express & Telegraph Co., recently reported incorporated at Natchez, Miss., has organized with \$10,000 capital stock; A. P. Simms, president; W. J. McCamley, treasurer; J. R. Holmes, vice-president; G. W. Myres, secretary and traffic manager; has had plans prepared by and awarded contract to G. W. Myres, Natchez, Miss., for erection of warehouse at Vidalia; 36x100 feet; ordinary construction; will install electric-light plant of 250 16-candle-power lights and gasoline engine for power; bids for machinery to be opened January 1; cost of building \$2500. (See "Machinery Wanted.")

RAILROAD CONSTRUCTION

RAILWAYS

Aberdeen, Miss.—Reported that George Townsend of Chicago is backing the plan to build the Aberdeen & Tombigbee Valley Railroad, of which H. E. Reynolds of Aberdeen is president and which has been granted an extension of franchise by the City Council.

Ablene, Texas.—Morgan Jones of Fort Worth, Texas, is reported to have closed an agreement with citizens of Ballinger, Texas, for the extension there of the Abilene & Southern Railway, now building between Abilene and Winters, Texas.

Altus, Okla.—President Ed Kennedy of the Altus, Roswell & El Paso Railway writes the Manufacturers' Record denying a press report that he has sold his line. He expects to be laying track on the first 50 miles by February 1. He now has 40 miles graded from Altus to the Texas boundary, and the grading crew is at work on the New Mexico part of the route.

Augusta, Ga.—An official letter to the Manufacturers' Record denies the press report that grades and curves will be revised on the Augusta Southern Railroad.

Baltimore, Md.—The Pennsylvania Railroad is reported to have financed plans for the Philadelphia, Baltimore & Washington Division, on which improvements costing in the neighborhood of \$5,000,000 may be made, including, probably, the proposed new passenger station in Baltimore. A. C. Shand is chief engineer at Philadelphia, Pa.

Blackwood, Va.—The Roaring Fork Railroad, 7½ miles long, is reported to have made surveys to extend from Roaring Fork, Va., to Big Black Mountain, five miles. C. J. Creveling is general manager at Blackwood, Va.

Carrizo Springs, Texas.—Reported that at a conference held in San Antonio, Texas, all plans were completed for building the Neuces Valley, Rio Grande & Mexico Railroad, to run from Artesia, Texas, on the International & Great Northern Railroad west 32 miles to Asherton, in Dimmit county. Asher Richardson and others of Dimmit county, of which Carrizo Springs is the county seat, are interested. J. L. Bivens of Pearsall, Texas, and A. M. McElwee of Fort Worth, Texas, are mentioned in connection with the enterprise.

Central City, Ky.—The proposed extension of the Kentucky Midland Railroad from Cypress Creek to Madisonville, Ky., will be 16 miles long. M. M. Wheeler of Central City, Ky., is chief engineer.

Cuthbert, Ga.—J. C. O'Dell, general manager of the Georgia, Florida & Alabama Railway, is reported as saying that an extension is practically certain, but the contract is not let. The route is not decided, but it is expected that it will be from Cuthbert to Columbus, 25 miles, though it may be from Damascus to Albany or from Carnegie to Richland. C. G. Barney is chief engineer at Bainbridge, Ga.

Dallas, Texas.—President B. L. Winchell of the Rock Island System is quoted as saying that the Rock Island, the Frisco and the Trinity & Brazos Valley railroads will establish first-class freight terminals in Dallas, to cost, including trackage, not less than \$400,000. Plans have been prepared. J. B. Berry is chief engineer of the Rock Island System at Chicago, Ill., and C. M. Case of Fort Worth is chief engineer for it in Texas.

Elizabeth City, N. C.—D. G. Wilson of Weeksville, N. C., and others are reported to be contemplating the building of an electric railway from Elizabeth City via Weeksville to Lister's Pier, at the mouth of Little River.

Elkin, N. C.—The Elkin & Allegany Railroad Co. is reported to be pushing construction on its line from Elkin to Sparta, N. C., about 40 miles, the graders now being about eight miles from Elkin.

Fairburn, Ga.—All of the \$75,000 required

to build the proposed Fairburn & Atlanta Railway is reported subscribed, and construction is to begin in January; line is to be 10 miles long. W. T. Roberts of Fairburn is president.

Frankfort, Ky.—John Blair MacAfee of Philadelphia, president of the Lexington Railway Co. of Kentucky and vice-president of the Lexington & Interurban Railways Co., is reported to be considering the proposition to build an electric railway to connect Lawrenceburg and Frankfort.

Frederick, Md.—The Washington, Frederick & Gettysburg Railway, from Frederick to Thurmont, Md., 16 miles, is reported sold to Dr. Llewellyn Jordan of Washington, D. C., representing a syndicate which, it is expected, will carry out the plan of the road to extend 17 miles from Thurmont, Md., to Gettysburg, Pa., and about 35 or 40 miles in the opposite direction from Frederick to a connection with the Great Falls & Old Dominion Railway out of Washington, of which John R. McLean is president.

Gadsden, Ala.—Reported that the Central of Georgia Railway is surveying in Cherokee county for a loop line from Cedar Bluff to Somerville via Lawrence. C. K. Lawrence is chief engineer at Savannah, Ga.

Glenray, W. Va.—The Glenray & Richwood Railroad Co. has been chartered to build a railroad from Alderson, in Monroe county, to Richwood, in Nicholas county, about 40 miles; capital, \$20,000; headquarters at Glenray, W. Va. The incorporators are F. M. Arnold, Harry E. Rugh, A. G. Corbett, A. J. Davis and Harry F. Stratton. This proposed line would connect the Chesapeake & Ohio and the Baltimore & Ohio railroads.

Grenada, Miss.—Chester H. Pond of Moorehead, Miss., is reported as saying that capital has been raised, surveys completed and that work will begin on the proposed Grenada & Pensacola Short Line within six months. This line has previously been referred to as the Memphis & Gulf Railway. Connection will, it is said, be made with the Illinois Central Railroad.

Hawkinsville, Ga.—The Manufacturers' Record is informed that application has been made to charter the American Railroad Co. to build a line about 60 miles long from Abbeville, Ga., via Hawkinsville and Grovania, to Winchester, Ga.; capital from \$100,000 to \$1,000,000. Bonds to the amount of \$15,000 may be issued. Line will run through Wilcox, Pulaski, Houston and Macon counties; headquarters at Hawkinsville. The incorporators are M. H. Boyer of Hawkinsville, Ga.; Geo. W. Bannerman, John E. Lang, S. N. Kriescher, David J. Gitto, John S. Duncan, E. Parry Bannerman and George W. Flood of Nassau county, New York, and John R. Parry of Connecticut.

Huntsville, Ala.—W. J. Bennett & Co. are reported to have completed three miles of their five-mile grading contract on the Nashville & Huntsville Railway. Other contractors are grading toward the Tennessee boundary. Rights of way are reported all secured.

Jackson, Miss.—Charter is reported in preparation for a new line, that of the Mississippi Belt Line & Terminal Co., which has applied to the City Council for a franchise.

Leeper, Mo.—The Missouri Southern Railroad, it is reported, may build an extension from Bunker, Mo., to Salem, Mo., 28 miles. G. W. Payne of Bunker, Mo., is chief engineer.

Little Rock, Ark.—The Rock Island System has, it is reported, decided to carry out its plans to establish large yards and buildings at Hot Springs Junction, as proposed some time ago. About \$150,000 is to be spent. J. B. Berry is chief engineer at Chicago, Ill.

Live Oak, Fla.—H. E. Warwick of Perry, Fla., is the contractor for an 11-mile extension of the Live Oak, Perry & Gulf Railway from Still No. 3 to the Aucilla River, this being on the extension from Hampton Springs to St. Marks, 30 miles.

Marshall, Texas.—The Marshall & East Texas Railway Co., chartered early in the fall to take over the Texas Southern Railroad, will, it is reported, build about 20 miles of line soon, but it is not decided when contracts will be let. Grade is reported complete for some distance south of Marshall. J. E. Votaw of Marshall, Texas, is general superintendent, and Albert A. Perkins of St. Louis, Mo., is president.

Moccasin Gap, Va.—Reported that construction will probably be resumed soon on the Holston River Railroad, upon which considerable work was done before the panic. Line is to run from Moccasin Gap, on the Virginia & Southwestern Railway, to Persa, Tenn., on the Southern Railway, about 40 miles. The Southern is to build the line, and W. H. Wells of Washington, D. C., is engineer of construction.

Monroe, La.—The Monroe, Farmerville & Northwestern Railway Co., which proposes to build a line from Monroe, La., to Hope, Ark., 120 miles, is reported to be assured of New York capital to fulfill its plans. It is expected that construction will begin within eight weeks. D. H. Nichols is promoting the enterprise.

Morgantown, W. Va.—The Morgantown & Dunkard Valley Railroad Co. is reported to have ordered rails to build track on its first five miles from Morgantown to Barker—otherwise Stumptown. J. Ami Martin is general manager.

Morgantown, W. Va.—H. R. Warfield, president of the Deckers Creek & Cheat River Railway Co., Morgantown, W. Va., is quoted as saying that survey is made and capital secured for its proposed electric railway along Deckers Creek via Dellslow to Cheat River, and this is expected to be built immediately. Presumably the company will do its own construction, as he is reported as stating that contracts will not be let. Extension may be made to Point Marion.

Mountain Home, Ark.—The Manufacturers' Record is informed that the proposed electric railway from Mountain Home, Ark., to Willow Springs, Mo., is as yet only talked about. S. E. Carter of Springfield, Mo., is named as the promoter.

Nashville, Tenn.—President H. H. Mayberry of the Nashville Interurban Railway is quoted as saying that it is expected to complete track from Nashville to Franklin, Tenn., 17 miles, by December 19. A mile of track is being laid every day.

New Iberia, La.—An officer of the Central Railroad Co. of Louisiana, which proposes to build a line out of Leesville, La., is reported as saying that it is projected to New Orleans, 242 miles. C. L. Provost of New Iberia, La., and others are interested.

New Orleans, La.—The Grand Isle Railroad Co., it is reported, will publish its charter and is being formed to take over the New Orleans, Fort Jackson & Grand Isle Railway and build extensions thereto, as previously outlined. The incorporators are Arthur Kennedy, F. Mueller, Otto P. Maier, J. Stans Landry, John Watt, Ed. P. Ivy and Edward W. Burgis. Later—The charter has been published. Capital \$1,000,000.

Ocala, Ga.—An official of the Ocala Southern Railroad is quoted as saying that contract has been let to R. S. Talmage of Ocala, Ga., to build its proposed line from Ocala to Allapaha, Ga., 17 miles, and from the latter place to Nashville, Ga., 13 miles more. J. A. J. Henderson of Ocala and others are interested.

Parkin, Ark.—An officer of the Lansing Wheelbarrow Co., Lansing, Mich., writes the Manufacturers' Record confirming the report of charter of the Helena, Parkin & Northern Railway Co. to build a line from Whitmore, Ark., on the Choctaw, Oklahoma & Gulf division of the Rock Island via Parkin, on the Iron Mountain division of the Missouri Pacific to Marked Tree, Ark., on the St. Louis & San Francisco Railroad, about 25 miles. Contract is let to D. S. Watrous of Parkin, Ark.

Pecos, Texas.—L. M. Swinehart, representing Chicago financiers, it is said, has made a proposition to build a railroad from Pecos via Saragosa and Balmorhea to the Reeves and Jeff Davis county line, \$70,000 to be paid upon completion, including land bonuses, and the proposition is reported accepted. He is preparing profiles and is expected to begin construction about January 15.

Portsmouth, Va.—The Seaboard Air Line receivers have been authorized to issue \$4,250,000 of receivers' certificates, to pay debts and also to make improvements and betterments. They have been already sold contingent upon approval by the court, which is now granted. W. L. Seddon is chief engineer at Portsmouth, Va.

Purcell, Okla.—The Oklahoma Central Railway, it is reported, contemplates carrying out its plans to extend from Lehigh, Okla., to Paris, Texas. Dorset Carter is general manager and F. C. Hand chief engineer, both at Purcell, Okla.

Quitman, Ark.—At a mass-meeting of citizens a resolution was adopted offering \$5000 bonus to the Missouri & North Arkansas Railroad to extend its line to Quitman. W. S. Dawley, St. Louis, Mo., is chief engineer of the railroad.

Rockland, Texas.—The Burrs Ferry Brownell & Chester Railway Co., according to a report quoting an officer of the line, is now constructing the proposed extension from Turpentine to Brownell, Texas, 15 miles.

Rocky Mount, N. C.—Concerning the report that it would extend its railroad, the Tar River Lumber Co. of Rocky Mount writes the Manufacturers' Record that the extension

will be one or two miles long, and will be built during the coming year.

Roscoe, Texas.—The contractors on the extension of the Roscoe, Snyder & Pacific Railway, according to a report quoting an officer of the line, are Smith & Harrington of Fluvanna, Texas, and Sammons & Snyder of Snyder, Texas. The extension is 19 miles from Snyder to Fluvanna. Martin Duvall of Snyder, Texas, is chief engineer.

Ruston, La.—Surveys are reported made for the Ruston, Natchitoches & Northeastern Railway from Ruston to Farmerville, La., 26 miles. J. H. Nolan of Ruston, La., is president.

Ruston, La.—The United Lumber Co. of Quitman, La., writes the Manufacturers' Record confirming the report that it will build a railroad from Ruston to Vernon, La. It will have heavy rails, and while at first a private line, it is to be built with the idea of making it a common carrier in the future. The company will remove to Ruston. Line will be 10 miles long.

San Antonio, Texas.—The San Antonio & Rio Grande Railway, it is reported, will build its line from a point on the Hidalgo branch of the St. Louis, Brownsville & Mexico Railway midway between its two termini, and perhaps near Mercedes, Texas. Sixteen miles of grade are reported made north through the new town of Chapin. S. A. Robertson, chief engineer, has surveyed as far north as Falfurrias a terminus of the San Antonio & Aransas Pass Railway, and from there northwest to a connection with the Texas-Mexican Railway. Southward from its starting point the line is to build to a point on the Rio Grande near the San Juan plantation. He has the contract to build the line to Lacom, about 15 miles north of Chapin.

San Antonio, Texas.—Tracklaying is reported begun on the Artesian Belt Railroad, which is being built by Dr. C. S. Simmons from Macdonna to Simmons City via Kirk, Fruitland, Poteet, Brooklyn, New Plessanton and New Artesia. J. F. Burns of Devine, Texas, is contractor, and William Bradburn of San Antonio, Texas, is chief engineer.

Siloam Springs, Ark.—The Siloam Springs Ten Thousand Club, it is reported, appointed a committee on the proposed interurban railroad to connect Siloam Springs, Bentonville, Rogers and Fayetteville with Joplin, Mo. The committee are C. Harrington, M. Halvorsen, L. J. Rees, W. T. Stahl, E. C. McCulloch and J. H. Perry.

Spartanburg, S. C.—The Carolina, Clinchfield & Ohio Railway Co., which is building from Bostic, N. C., to Spartanburg, S. C., has applied for a charter in South Carolina, and, as heretofore reported, also contemplates constructing from Cowpens Ridge to Columbia, about 100 miles.

St. Joseph, Mo.—An official of the Union Terminal Railway is reported as saying that it contemplates building two miles of new track. C. L. Mason is superintendent at St. Joseph, Mo.

St. Mary's, Ga.—An officer of the St. Mary's & Kingsland Railway Co. is quoted as saying it is expected that the company's forces will soon begin work on an extension from Kingsland northwest toward Waycross, Ga., 48 miles. Captain L. Johnson of St. Mary's Ga., is president.

Sweetwater, Texas.—The Kansas City, Mexico & Orient Railway is reported to have completed its line from Wichita, Kans., to Sweetwater, Texas, 432 miles, having finished the bridge across the Pease River. The extension to San Angelo, Texas, is to be started immediately.

Tellico Plains, Tenn.—Reported that the Babcock Syndicate, which has lumber mills at Tellico Plains, contemplates building an independent railway from their mills at Etowah to connect with the Louisville & Nashville Railroad, about 18 miles.

Temple, Texas.—The Missouri, Kansas & Texas Railway will, it is reported, immediately begin work on extensive improvements to its terminals at Temple. Additional tracks will be built in both the north and south yards. J. W. Petheram is chief engineer at Dallas, Texas.

Tulsa, Okla.—An officer of the Western Transportation Co., St. Paul, Minn., advises the Manufacturers' Record that it is not building any railroad from Tulsa or from Oklahoma City. This refers to a recent press report.

Washington, D. C.—The Secretary of the Navy has sent to Congress an estimate of cost of the proposed spur track to the Washington Navy-yard, the same being \$303,683.

Weston, W. Va.—George I. Keener has applied for an electric railway franchise over the turnpike from Weston to Roanoke and Jacksonville, in Lewis county.

West Point, Va.—An officer is reported as saying that contracts will probably be let

within a month for the proposed Richmond, Urbanna & Peninsular Railway from West Point, Va., to Centerville, Saluda and Urbanna, Va., about 17 miles. Capital is now being obtained. J. C. Robertson is president and C. P. E. Burgwyn is chief engineer, both at Richmond, Va.

Wheeling, W. Va.—With reference to a report that the Baltimore & Ohio Railroad contemplated building a line from Morgantown to Wheeling, W. Va., an officer of the company informs the Manufacturers' Record that nothing is being done on this survey at present.

STREET RAILWAYS

Asheville, N. C.—The property of the Asheville Transit Co. is reported to have been purchased by R. S. Howland, representing the majority bondholders, and it is possible that some improvements may be made.

Brownsville, Texas.—Two applications for street-railway franchises have been made, one by J. B. Scott and associates, and the other by L. H. Hallam and Wm. H. Mason, Jr.

Claremore, Okla.—Perdue's Sanitarium & Street Railway Co. has been chartered with authorized capital of \$300,000 by W. J. Perdue, C. F. Godbey, O. C. Wing, H. Jennings and Hiram Stephens.

Cleburne, Texas.—J. L. Longino, representing Howard F. Smith, of St. Louis, is reported to have investigated conditions in Cleburne with a view to building a street railway.

Concord, N. C.—Franchise is reported granted to James W. Barry of Boston for a street railway in Concord, construction thereof to begin within two years and to be completed in six months. The franchise of the Concord Street Railway Co., granted two years ago, is reported taken over by the new company.

Dallas, Texas.—The Dallas Consolidated Electric Street Railway Co., it is reported, will immediately build an extension and will also lay heavy rail.

El Paso, Texas.—The petitions of Frank R. Tobin and J. A. Happer, each for a street railway franchise, are being considered by the city authorities.

Houston, Texas.—David Daly, manager of the Houston Electric Co., is reported as announcing that an extension will be made to Houston Heights.

Lake Charles, La.—The Lake Charles Street Railway Co. is reported as announcing that it will shortly begin construction of an extension to the Hi-Mount addition of Lake Charles.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—Mineola Light & Ice Co., Mineola, Texas, in market for 10x10x12 air compressor; new or second-hand; steam-driven; center crank; vertical poppet type air valves.

Belting.—Geo. W. Evans, Fallston, Md., wants prices on belting. (See "Creamery Equipment.")

Desks, etc.—City Council, Marianna, Fla., wants desks and seats for school building. Address A. P. Mulkey.

Boiler.—See "Engine and Boiler."

Boiler.—Wood & Crabbe Grain Co., Birmingham, Ala., wants prices on 250-horsepower horizontal water-tube boiler.

Box Shooks.—Bedford Can Co., Bedford City, Va., will want about 50 cars box shooks for manufacture of tomato cases.

Bridge Construction.—River, Bridges and Wharves Committee of City Council, Augusta, Ga., will receive bids until January 12 for furnishing all labor and material and constructing complete, except piers, steel bridge with draw span over Savannah River at Center street; eight spans of total length of 928 feet; estimated cost, \$45,000; cash or certified check for \$500. For further information

mation address Nisbit Wingfield, City Engineer.

Building Materials.—H. H. Roof, 829 Perdido St., New Orleans, La., wants catalogues and samples of building materials interesting to architects.

Cars.—See "Mining Equipment."

Cars.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants gasoline passenger and freight cars, standard gauge; 12 No. 2 Russell logging cars, and 20 40,000 to 60,000 Kilby logging cars.

Cars.—See "Tank Cars."

Cotton Gins.—S. T. Hughes, Trenton, S. C., wants cotton gin and press.

Cranes.—Southern Marble & Stone Co., Gadsden, Ala., wants estimates on 25-ton and 10-ton overhead traveling cranes. (See "Mining Equipment.")

Creamery Equipment.—Geo. W. Evans, Salim Farm, Fallston, Md., wants prices on creamery equipment, etc., including gasoline engine of about four horse-power, ice crusher, churn, separator, ice-cream machine, butter worker, cooling creamer, milk cooler, shafting, pulleys, belting, etc.; for small creamery.

Drain Construction.—Board of City Commissioners, Galveston, Texas, will receive bids until December 24 for constructing reinforced concrete drain on Avenue M from 31st street to 43d street, about 450 linear feet, together with all appurtenances thereto; plans, details and specifications on file in office of A. T. Dickey, City Engineer, and can be obtained on application; certified check for 5 per cent. of amount of bid; V. E. Austin, Commissioner of Streets and Public Property; A. T. Dickey, City Engineer; John D. Kelly, City Secretary.

Dredge, etc.—John Donohue, Grand Hotel, Cincinnati, Ohio, wants second-hand small ditching dredge and three-quarter-yard orange-peel bucket.

Dredging.—Bids will be received at U. S. Engineer Office, Mobile, Ala., for dredging in harbor at Mobile until January 15; information on application; H. Jervy, Major, Engineers.

Drier.—American Machinery Co., West End Trust Bldg., Philadelphia, Pa., wants rotary steam or hot-air drier, new or second-hand, to dry sand or clay containing 10 per cent. of moisture; want drier of size to dry 75 per cent. of this material in 10 hours.

Electric Motor and Generator.—James Harrison, Montezuma, Ga., wants prices on three-phase 60 or 75-kilowatt generator and 35 and 50 horse-power motors; second-hand.

Electric-light Plants.—Simms Express & Telegraph Co., Natchez, Miss., wants prices on electric-light plant of 250 16-candle-power lights, either complete or dynamo and equipment separate, and gasoline engine to operate same.

Electric-light Plant.—Bids are invited for construction of electric-light and gas plant for street and private lighting, with day current, in Chillicothe, Mo.; 8000 population; 15-year franchise. Address H. L. Spence, City Clerk.

Electric-lighting Plant.—City of Leesburg, Fla., will open proposals January 5 for water-works and electric-lighting plant; L. M. Johnson, clerk. (See "Water-works.")

Electric-light System.—W. P. Redd, 1114 Main St., Richmond, Va., Mayor of Highland Park (P. O. Richmond), will receive bids until January 6 for 10-year franchise for construction of system furnishing electric light and power in Highland Park.

Electrical Machinery.—Riverside Lumber Co., Columbia, Tenn., wants prices on alternating-current dynamos from 5 to 20 horse-power.

Engine.—J. L. Henderson & Co., 1405 I Ave., Columbus, Ga., wants new or second-hand steam or gas engine of 2½ or 3 horse-power, on wheels. Give full description.

Engine and Boiler.—Southern Marble & Stone Co., Gadsden, Ala., wants estimates on 300-horse-power horizontal steam engine and boiler. (See "Mining Equipment.")

Filtration Plant, etc.—H. H. Sayre, City Engineer, Ardmore, Okla., wants to correspond with engineers and contractors relative to installation of filtration plant for water-works system, and septic tanks for sewage disposal.

Gas Producers.—Ira W. Hall, 366 South Fountain Ave., Springfield, Ohio, wants information regarding gas producers for burning lime. (See "Limekilns.")

Gasoline Engines.—See "Electric-light Plants."

Gasoline Engine.—See "Engine."

Gasoline Engine.—Geo. W. Evans, Fallston, Md., wants prices on gasoline engine; about four horse-power. (See "Creamery Equipment.")

Gas Plant.—See "Electric-light Plant."

Graphite.—Richard Weininger (acting as American agent of Karl Boschan of Budapest), 401 Fifth Ave., New York, wants addresses of producers of flake graphite for export.

Hardware.—Farmers' Hardware & Supply Co., South Boston, Va., is buying hardware for jobbing department.

Heating and Ventilating System.—Bureau of Supplies and Accounts, Navy Department, Washington, D. C., will open bids January 12 for furnishing and installing heating and ventilating systems in building No. 37, Norfolk Navy-yard; write for schedule No. 689.

Heating Plant.—J. J. Mixon, Winnfield, La., wants prices on steam-heating plant and forced hot-air system for \$25,000 school.

Ice Machine.—Howe Company, 247 West Main St., Louisville, Ky., wants 40, 50 or 60-ton second-hand compression ice machine; give description.

Ice-cream Machine.—See "Creamery Equipment."

Ice Machine.—Oscar High, Whiteville, N. C., wants 2½ to 5 ton ice machine; complete, except power.

Ice Machine.—James Harrison, Montezuma, Ga., wants prices on second-hand 5 or 10-ton ice machine.

Ironworking Machinery.—See "Machine Tools."

Levee Construction.—Mississippi River Commission, Fourth District, 338 St. Charles Ave., New Orleans, La. Sealed proposals for constructing about 13,000 cubic yards of levee work in Atchafalaya Levee District will be received until December 17; information on application; H. Burgess, Captain, Engineers.

Limekilns.—Ira W. Hall, 366 South Fountain Ave., Springfield, Ohio, wants information relative to limekiln processes.

Locomotive.—John Donohue, Grand Hotel, Cincinnati, Ohio, wants 12-ton Shay geared locomotive; second-hand.

Locomotives.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants 18-ton geared locomotive (Heisler preferred), one 9x14 or 10x14 Forney type locomotive, and 18x24 four or six-driver, leading trucks, freight locomotive, standard gauge.

Log Loader.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants log loader (Barnhardt preferred).

Lumber.—Central Iron Works, Quincy, Ill., wants addresses of Southern manufacturers prepared to furnish one-inch select cypress.

Machine Tools.—Hines Manufacturing Co., Portland, Ind., will be in market for punches, shears, drills, lathes, etc.

Machine Tools.—L. R. White, North Bennington, Vt., wants small-sized milling machine and a drill press.

Machine Tools.—Bureau of Supplies and Accounts, Navy Department, Washington, D. C., will open bids January 5 for cam brake, for Philadelphia Navy-yard, schedule No. 688; three engine lathes, for Charleston, schedule No. 687; four paint and color mills, one pair of color mixers, two change can mixers, all for Brooklyn, schedule No. 686; one rotary splitting shear, for Philadelphia, schedule No. 688. Write for schedule by number.

Mattress Machine, etc.—J. L. Henderson & Co., 1405 I Ave., Columbus, Ga., wants new or second-hand machine to renovate cotton mattresses, to pick and fill at same time; also wants small steam or gas engine, on wheels, for machine.

Metal Strip.—J. J. Orchard, care of Texas M. L. S. I. Ass'n, Dallas, Texas, wants to correspond with manufacturers of metal weather stripping.

Metal Work.—Sealed proposals will be received at office of Lighthouse Engineer, Mobile, Ala., until January 4 for furnishing materials and labor of all kinds necessary for construction and delivery of metal work for Galveston Jetty Light Station, Texas, in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to Lighthouse Engineer, Mobile, Ala.

Mining Equipment.—Southern Marble & Stone Co., Gadsden, Ala., wants estimates on 300-horse-power horizontal steam engine and boiler, 25-ton overhead traveling crane, 10-ton overhead traveling crane, necessary track, line shaft, pulleys, belts, cars, etc.; also on quarrying machinery.

Oil-mill Machinery.—Shaw Cotton Oil Co., Shaw, Miss., wants two hydraulic oil-mill presses and one cooker.

Paving.—Board of Public Works, H. F. Van Dusen, chairman, Chattanooga, Tenn., will receive bids until December 22 for improving Broad street between 4th and 9th streets; work to consist in part of new asphalt paving, asphalt resurfacing and brick

paving, not including space within and between railroad tracks. Blank proposal forms and specifications furnished on application; certified check for \$500, payable to T. J. Gillespie, City Treasurer.

Paving.—City of Okmulgee, Okla., will receive bids until December 21 for street paving, concrete base and standard paving bricks. For specifications and information address F. Villiers, City Clerk.

Paving.—Contract will be let January 1 for graveling, grading and guttering streets of Humboldt, Tenn.; bids will be received until that time; profiles and specifications on file at office of N. A. Senter, Mayor, Humboldt, Tenn.

Paving.—P. M. Harding, Mayor, and Aldermen, Vicksburg, Miss., will receive bids until December 21 for paving Clay street with vitrified brick, granitoid, bitulithic, asphalt or mineral rubber; plans and specifications obtainable on application to City Clerk; certified check for 5 per cent. of bid.

Paving.—Board of Public Works, H. F. Van Dusen, chairman, Chattanooga, Tenn., will receive bids until December 22 for paving with vitrified brick Thirteenth (formerly Hooke) street, between Boyce and Cowart streets. Blank proposal forms and specifications furnished on application. Certified check for \$250, payable to T. J. Gillespie, city treasurer.

Piping.—S. Jones, Alvin, Texas, wants prices on piping for water-works and sewerage.

Plating Equipment.—Brill Electric Co., Augusta, Ga., wants plating outfit and information on same.

Postoffice Equipment.—J. L. Davenport, Jamesville, N. C., wants outfit for fourth-class postoffice.

Power Machinery.—Hines Manufacturing Co., Portland, Ind., will be in market for power machinery.

Pulleys and Shafting.—Geo. W. Evans, Fallston, Md., wants prices on shafting and pulleys. (See "Creamery Equipment.")

Quarrying Machinery.—Southern Marble & Stone Co., Gadsden, Ala., wants estimates on quarrying machinery. (See "Mining Equipment.")

Rails.—See "Mining Equipment."

Rails.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants 4000 tons 60-pound railers.

Railway Equipment.—See "Cars."

Refrigerating Machinery.—T. S. Ragsdale Company, Smithfield, N. C., wants names of manufacturers of refrigerating equipment for ice factory.

Road Construction.—Bids will be received at office of Charles Avis, Recorder, Logan, W. Va., until December 23 for building, repairing and maintaining for 12 months from completion of road from Logan, Laundry, along river bank to corporate limits of city; roadbed to be of logs, brush, stone and earth, not less than 12 feet wide and 7 feet above low-water mark; work to be completed within 30 days from awarding of contract.

Road Rollers.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants three macadam road rollers, 5 to 7½ and 10 tons.

Saws.—Powell Land & Lumber Co., Rusk, Texas, wants combination rip and resaw and scroll saw. (See "Woodworking Machinery.")

Scales.—Martin Lopez, Box 143, San German, Porto Rico, wants to correspond with manufacturers of or dealers in automatic scales, for butcher shops, 1 to 25 pounds; to have two dials, and to deliver slip showing date and weight, without use of coin.

Seating.—See "Desks, etc."

Septic Tanks.—H. H. Sayre, City Engineer, Ardmore, Okla., wants to correspond with engineers and contractors relative to installation of septic tanks for sewage disposal. (See "Filtration Plant, etc.")

Sewer Construction.—See "Street Paving."

Sewer Construction.—See "Drain Construction."

Sewer Construction.—Bids will be received at office of Commissioners of Sewerage, Equitable Bldg., Louisville, Ky., until December 23 for construction of Barret avenue sewer, contract No. 17, and until December 30 for construction of sewers known as Hoerts avenue and Aubin avenue sewers, contracts Nos. 18 and 19 of comprehensive system of sewerage for Louisville. Contract No. 17 will consist mainly of building concrete sewer about following lengths: 1125 feet 27-inch, 685 feet 33-inch, 730 feet 63-inch and 680 feet 39-inch, including about 700 cubic yards of concrete; contract No. 18, of 3000 feet of concrete sewer from 24 inches to 5 feet in diameter; maximum depth of 25 feet, and including about 900 cubic yards of concrete; contract No. 19, of 1540 feet of 24 and

27-inch concrete sewer, and laying of 600 feet of 20-inch pipe, including about 325 cubic yards of concrete. Plans and specifications may be seen at office of Commissioners and of Harrison P. Eddy, consulting engineer, 14 Beacon street, Boston, Mass.; each bid to be accompanied by certified check for at least 7 per cent. of total amount of bid.

Sewer Construction.—City of Muskogee, Okla., will receive bids until December 21 for construction of storm sewers aggregating \$250,000. Plans and specifications on file at office of L. B. Kinsey, City Engineer, and may be obtained on payment of \$10. Work will be part brick and part vitrified pipe.

Sewer Work.—Bids addressed to City Secretary, Houston, Texas, will be received until December 28 for connection of South End sewer lift with sewer, according to plans and specifications on file at City Engineer's office, City Hall; certified check, \$250, payable to H. B. Rice, Mayor.

Steam Shovels, etc.—J. F. Donahoe Company, 1905 Second Ave., Birmingham, Ala., wants 30 to 35-ton Trench steam shovel and 30 to 35-ton Vulcan or Thew revolving shovel.

Steel.—See "Truck Parts."

Steam Shovel.—Miles & Puckett, Opelika, Ala., want to buy second-hand steam shovel, for handling brickyard clay. Send cut, full particulars, etc.

Steam Shovels.—John Donohue, Grand Hotel, Cincinnati, Ohio, wants one traction and one Thew rotary steam shovel; second-hand.

Street Paving.—City of Charleston, W. Va., expects to receive proposals about January 1 for constructing approximately 110,400 square yards of street paving, 47,580 linear feet of curbing and 7340 linear feet of sewer ranging in diameter from 8 to 42 inches; W. A. Hogue, City Engineer of Charleston.

Stump-puller.—Charles Markwell, Versailles, Ky., wants stump-puller, to pull small trees and stumps.

Tank.—Tarboro Cotton Factory, Tarboro, N. C., wants estimates on erection of 50,000-gallon water tank, in accordance with specifications of National Board of Underwriters.

Tanks.—S. Jones, Alvin, Texas, wants prices on tanks for water-works for small town.

Tank Cars.—Joseph E. Bowen, 901 Bank of Commerce Bldg., Norfolk, Va., wants good cheap tank cars; ready for shipment.

Telephone Systems.—Martin Lopez, Box 143, San German, Porto Rico, wants to correspond relative to interoffice telephone system.

Telephone Wire.—Joseph Hooker, Dillboro, N. C., will want several miles Nos. 12 and 14 telephone wire; send samples, etc.

Truck Parts.—Chesnut Loading Truck Co., 14 North Harvey St., Oklahoma City, Okla., wants to correspond with manufacturers of miter gears, sprockets, shafting, rack gear, hydraulic cylinders and pistons, truck wheels and axles and angle steel for frames and standards.

Turntable.—Moore & Hugenin, Tulsa, Okla., want to correspond with automobile-turntable manufacturers.

Wagon Parts.—American Wagon Co., care of S. J. MacFarren, 1403 New York Ave. N. W., Washington, D. C., wants addresses of manufacturers of wagon parts, including wagon poles, hub bands and (cast) splindles; also finished wheels (woodwork) for one to four-ton wagons. Wants also addresses of manufacturers of special machinery for making such parts.

Water System.—Office of Commissioners, D. C., Washington. Sealed proposals will be received until December 21 for equipping auxiliary water system and fire protection for Home for Aged and Infirm, subdivisions of Bellevue and Blue Plains, D. C. Blank forms of proposals, specifications and all necessary information may be obtained at office of chief clerk of Engineer Department, Room 427 District Building; Henry R. F. Macfarland, Henry L. West, Jay J. Morrow, Commissioners, D. C.

Water-wheel.—City of Kaufman, Texas, will want turbine wheel for water-works. Address E. E. Thompson.

Water-works.—City of Leesburg, Fla., will receive bids until January 5 for water-works and electric-lighting plant; contract of five years given, carrying with it 30-year franchise; will pay \$300 per year for public service; L. M. Johnson, clerk.

Wire.—Victoria Metal Co., Box 792, Richmond, Va., wants prices on quantity of broom wire.

Wire.—See "Telephone Wire."

Woodworking Machinery.—See "Wagon Parts."

Woodworking Machinery.—Powell Land & Lumber Co., Rusk, Texas, wants outside molder, combination rip and resaw, scroll saw and spindle lathe; new or second-hand.

PROPOSALS INVITED FOR CONSTRUCTION WORK.

Details regarding construction work, proposals invited, etc., noted in the following list, will be found in this and recent issues of the MANUFACTURERS' RECORD and the DAILY BULLETIN OF THE MANUFACTURERS' RECORD.

This list includes only items containing specifications for bids. Many additional opportunities for construction and machinery contracts can be noted in the Construction Department.

* Indicates that the item has appeared in our "Machinery, Proposals and Supplies Wanted" department.

Date to open bids. (When date is not given it has not been fixed.)	Published in Daily Bulletin.	Manu- facturers' Record.
BRIDGES, CULVERTS, VIADUCTS.		
Jan. Mena, Ark.	Oct. 17	Oct. 22
*Concrete Steel Bridge, Takoma Park, Md.	Oct. 29	Nov. 5
*Six Steel Bridges, Abbeville, S. C.	Nov. 5	Nov. 12
*Culverts, Barton Heights, Va.	Dec. 1	Dec. 3
Dec. 19 *Steel Highway Viaduct, Batesville, Ark.	Dec. 7	Dec. 10
Concrete Viaduct, Houston, Texas.	Dec. 7	Dec. 10
Jan. 12 *Steel Bridge, Augusta, Ga.	Dec. 11	Dec. 17
Dec. 19 Steel Bridge, Glengary, W. Va.	Dec. 16	Dec. 17
Five Bridges, Dallas, Texas.	Dec. 15	Dec. 17
ELECTRIC LIGHT AND POWER PLANTS.		
*Bristol, Tenn.	Nov. 2	Nov. 5
Dec. 22 *Plant for Jefferson Barracks, St. Louis, Mo.	Nov. 28	Dec. 3
Chillicothe, Mo.	Dec. 4	Dec. 10
*Norcross, Ga.	Dec. 7	Dec. 10
*Water-power-electric Development, White Spring, Fla.	Dec. 8	Dec. 10
Jan. 5 *Franchise Offered, Lynchburg, Fla.	Dec. 12	Dec. 17
Jan. 6 *Franchise Offered, Highland Park, Va.	Dec. 15	Dec. 17
MISCELLANEOUS CONSTRUCTION WORK.		
*Levee Work, Waco, Texas.	Nov. 13	Nov. 19
Dec. 24 *Seawall, Fort Moulton, Ala.	Nov. 23	Nov. 26
Wharves, New Orleans, La.	Dec. 5	Dec. 10
*Heating Plant, Sumter, S. C.	Dec. 8	Dec. 10
Jan. 6 *Ditching, Houston, Texas.	Dec. 9	Dec. 10
ROAD AND STREET IMPROVEMENTS.		
*Vitrified Brick, etc., Ashland, Ky.	Oct. 30	Nov. 5
Dec. 22 *Cement Sidewalks, etc., Opelousas, La.	Nov. 25	Dec. 3
Dec. 23 *Street Paving, etc., Roanoke, Va.	Dec. 1	Dec. 3
Vitrified Brick, etc., Ada, Okla.	Dec. 7	Dec. 10
Feb. 1 Macadam Roads, Durham, N. C.	Dec. 10	Dec. 17
Brick Paving, etc., Clinton, Mo.	Dec. 11	Dec. 17
Jan. 1 *Street Paving, etc., Charleston, W. Va.	Dec. 12	Dec. 17
Dec. 21 *Street Paving, etc., Okmulgee, Okla.	Dec. 12	Dec. 17
Dec. 22 *Vitrified Brick, Chattanooga, Tenn.	Dec. 15	Dec. 17
Dec. 22 *Asphalt Paving, Chattanooga, Tenn.	Dec. 15	Dec. 17
Jan. 1 *Gravel Streets, etc., Humboldt, Tenn.	Dec. 15	Dec. 17
Dec. 21 *Vitrified Brick, etc., Vicksburg, Miss.	Dec. 15	Dec. 17
Dec. 23 *Road Construction, Logan, W. Va.	Dec. 16	Dec. 17
SEWER CONSTRUCTION.		
*Sanitary Sewers, Winston, N. C.	Sept. 19	Sept. 24
Dec. 18 *Drainage, etc., San Antonio, Texas.	Oct. 23	Oct. 29
Dec. 21 *Reinforced Concrete Sewer, etc., Louisville, Ky.	Nov. 27	Dec. 3
Storm Sewerage, Muskogee, Okla.	Dec. 4	Dec. 10
Sewer System Surveys, Clinton, S. C.	Dec. 8	Dec. 10
Municipal System, Seymour, Texas.	Dec. 7	Dec. 10
Dec. 24 *Reinforced Concrete Drain, Galveston, Texas.	Dec. 10	Dec. 17
Dec. 23 *Sewer, etc., Louisville, Ky. (portion of general contract previously reported)	Dec. 1	Dec. 17
Dec. 21 *Storm Sewers, Muskogee, Okla.	Dec. 11	Dec. 17
Sewers, Park, Tenn.	Dec. 11	Dec. 17
Jan. 1 Sewer, Charleston, W. Va.	Dec. 12	Dec. 17
Dec. 28 *Sewer Connections, Houston, Texas.	Dec. 15	Dec. 17
WATER-WORKS.		
*System, Marceline, Mo.	Sept. 21	Sept. 24
*Municipal System, Unoltown, Ky.	Nov. 19	Nov. 26
Jan. 1 Municipal System, Palmetto, Fla.	Nov. 20	Nov. 26
Feb. 1 Municipal System, Osceola, Ark.	Dec. 4	Dec. 10
Municipal System, Seymour, Texas.	Dec. 7	Dec. 10
Water Mains, Huntsville, Ala.	Dec. 8	Dec. 10
Jan. 5 *Franchise Offered, Leesburg, Fla.	Dec. 12	Dec. 17
BANK AND OFFICE BUILDINGS.		
National City Bank, Birmingham, Ala.	July 28	July 30
First National Bank, Coeburn, Va.	Aug. 12	Aug. 13
Feb. Middletown Savings Bank, Middletown, Md.	Aug. 24	Aug. 27
C. P. McKinney, Ripley, Tenn.	Oct. 29	Nov. 5
Jan. First National Bank Building Co., Ft. Smith, Ark.	Oct. 30	Nov. 5
E. P. Ansley, Atlanta, Ga.	Nov. 9	Nov. 12
State National Bank Building, Little Rock, Ark.	Nov. 9	Nov. 12
Manhattan Sav. Bank & Trust Co., Memphis, Tenn.	Nov. 11	Nov. 12
Southern Life Insurance Co., Fayetteville, N. C.	Nov. 21	Nov. 26
First National Bank, Hendersonville, N. C.	Nov. 19	Nov. 26
Whitney Central National Bank, New Orleans, La.	Nov. 25	Dec. 3
Guarantee Trust & Banking Co., Atlanta, Ga.	Nov. 27	Dec. 3
Franklin Savings Bank, Frederick, Md.	Nov. 30	Dec. 3
First National Bank, Roanoke, Va.	Dec. 15	Dec. 17
P. H. Swearingen, San Antonio, Texas.	Dec. 16	Dec. 17
CHURCHES.		
First Baptist Church, Paris, Ky.	July 13	July 16
Hopkinsville, Ky.	Aug. 19	Aug. 20
Green Cove Springs, Fla.	Sept. 22	Sept. 24
Jan. 1 First Baptist Church, Lumberton, N. C.	Oct. 12	Oct. 15
Presbyterian Church, Whitman, Ga.	Nov. 2	Nov. 5
Jan. 5 Quiltman, Ga.	Nov. 23	Dec. 3
Jan. 1 Laurens, S. C.	Dec. 1	Dec. 3
Feb. Gillespie Avenue Baptist Church, Knoxville, Tenn.	Dec. 3	Dec. 10
Jan. 5 M. E. Church, Parkersburg, W. Va.	Dec. 8	Dec. 10
COURTHOUSES.		
Martinsburg, W. Va.	July 15	July 16
Dec. 26 Additions, Towson, Md.	Dec. 4	Dec. 10
GOVERNMENT AND STATE BUILDINGS.		
U. S. Postoffice, etc., Americus, Ga.	Nov. 18	Nov. 19
Dec. 28 U. S. Postoffice, etc., Lake Charles, La.	Nov. 18	Nov. 19
U. S. Postoffice, etc., Newbern, N. C.	Nov. 28	Dec. 3

Date to open bids.
(When date is
not given it has
not been fixed.)

GOVERNMENT AND STATE BUILDINGS.

Dec. 31 Barrack Building, Fort Howard, Md.	Dec. 1	Dec. 3
Barracks, Fort Moultrie, S. C.	Dec. 4	Dec. 10
Jan. 7 U. S. Postoffice, Johnson City, Tenn.	Dec. 4	Dec. 10
Jan. 9 U. S. Postoffice, Murfreesboro, Tenn.	Dec. 7	Dec. 10
Jan. 11 U. S. Postoffice, Gainesville, Ga.	Dec. 8	Dec. 10
Dec. 22 Weather Bureau, Mount Weather, Va.	Dec. 8	Dec. 10
Jan. 6 Stable, Fort Myer, Va.	Dec. 11	Dec. 17

HOTELS.

Coleman-Fulton Pasture Co., Gregory, Texas.	Sept. 9	Sept. 10
Hermitage Hotel Co., Nashville, Tenn.	Sept. 10	Sept. 17
Beville, Texas.	Nov. 25	Dec. 3
Corpus Christi, Texas.	Nov. 25	Dec. 3
Dec. 21 Pensacola, Fla.	Nov. 28	Dec. 2

MISCELLANEOUS STRUCTURES.

Jan. 1 Miller Store Co., Knoxville, Tenn.	Aug. 29	Sept. 3
Jan. 1 Memorial Home, Little Rock, Ark.	Nov. 25	Dec. 3
Infirmary, Catlettsburg, Ky.	Oct. 21	Oct. 22
County Home, Independence, Mo.	Dec. 7	Dec. 10

MUNICIPAL BUILDINGS.

City Stockade, Tampa, Fla.	Nov. 9	Nov. 12
Police Station, Anacostia, D. C.	Dec. 1	Dec. 3
Dec. 30 City Hall, Bamberg, S. C.	Dec. 3	Dec. 10
Dec. 28 City Hall, Alexandria, La.	Dec. 7	Dec. 10
Dec. 18 City Hall, Greenwood, S. C.	Dec. 8	Dec. 10
Dec. 28 City Hall, Alexandria, La.	Dec. 1	Dec. 17

SCHOOLS.

Jan. Nixon, Texas.	Sept. 23	Sept. 24
Hartshorne, Okla.	Nov. 28	Dec. 3
Dec. 23 Plans, not bids, Daytona, Fla.	Dec. 7	Dec. 10
Dec. 22 Raymona, Okla.	Dec. 8	Dec. 10
Jan. 8 Iva, S. C.	Dec. 11	Dec. 17
Jan. 8 Stillwater, Okla.	Dec. 14	Dec. 17
Dec. 20 Graham, Texas.	Dec. 15	Dec. 17
Dec. 23 Oklahoma City, Okla.	Dec. 15	Dec. 17
Dec. 21 Oklahoma City, Okla.	Dec. 15	Dec. 17
Dec. 20 Rosie, Ark.	Dec. 15	Dec. 17

WAREHOUSES.

State Warehouse, Baltimore, Md.	Dec. 15	Dec. 17
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INDUSTRIAL NEWS OF INTEREST

Wants a Machinery Salesman.

S. F. Bowser & Co., Inc., Fort Wayne, Ind., want to engage an experienced machinery salesman familiar with the manufacturing industries.

For Bricks and Building Materials.

Manufacturers of bricks and building materials wanting representation are invited to write to Walnwright, Jackson & Co., 738 Law Bldg., Norfolk, Va.

H. H. Roof, Architect.

Offices have been established at 829 Perdido street, New Orleans, La., by H. H. Roof, architect and superintendent. He invites manufacturers to send him catalogues and samples of building materials.

Wants to Represent Contractors.

An engineer located in a prominent Southern city wants to represent a strong contracting company taking contracts for sewers, roads, water-works and large buildings. He can be addressed as "Constructing Engineer," care of Manufacturers' Record.

Farmers' Hardware & Supply Co.

The Farmers' Hardware & Supply Co., South Boston, Va., is now buying and receiving stock to add to its jobbing department. This company has a large building for its purposes. It deals in hardware, implements of all kinds, builders' supplies, etc.

A Packing-House Proposition.

O. J. Morris, 842 Wilson Bldg., Dallas, Texas, wants to correspond with experienced parties who will be interested in a plan to establish a packing-house. The location is a southwestern city of 40,000 inhabitants with ample shipping facilities and plenty of hogs.

Southern Stills for Californians.

The McMillan Bros. Company of Mobile, Ala., completed and shipped to the Noble Electric Steel Co., San Francisco, Cal., a complete refining still, steam process, with tubular condenser. This contract tends to show that drawings and specifications can be furnished and as good copper work produced in the South as anywhere else. Copper for this outfit came from Clendenin Bros. of Baltimore, Md.

Shipbuilding Plant Offered.

The large plant of the Eastern Shipbuilding Co. at New London, Conn., is offered for sale in lots to suit purchasers. It includes machine, woodworking and pneumatic-tool shop, plate-rolling equipment, punch and shear shops and other mechanical apparatus, assembled new within the past seven years.

Sales will be held December 29, 30 and 31. Catalogues containing complete description and numerous illustrations, terms and conditions, etc., can be obtained by applying to the auctioneers, Messrs. J. E. Conant & Co., Lowell, Mass.

Increasing the Foom Facilities.

It has become necessary to increase the power facilities of the Foom Manufacturing Co. of Springfield, Ohio. The management has decided to install a complete new power equipment of much greater capacity than the present plant, and its factory will shut down from December 19 to January 3 while the improvements are being made. This announcement will interest the buyers of machinery and supplies for Southern cottonseed-oil mills and will enable them to arrange their orders so as not to be affected by the Foom Manufacturing Co.'s temporary cessation of operation.

Recent Concrete Pile Contracts.

The Raymond Concrete Pile Co. of New York and Chicago has contract for placing Raymond concrete piles in foundations of postoffice being erected at St. Louis, Bedford Stone & Construction Co., general contractor; about 55,000 feet of piling will be required. Another contract calls for placing Raymond concrete piles in foundations of grocery warehouse for E. D. Depew at Canal and Greenwich streets, New York, Radcliffe & Kelly, architect. This warehouse will be six stories high, but the foundations are designed to support three additional stories. The foundations will be called upon to sustain unusually heavy loads.

The Beaumont Iron Works.

An interesting statement regarding the Beaumont Iron Works of Beaumont, Texas, has been issued recently by A. B. Brock, the court's receiver. It presents data and figures showing that the enterprise has steadily progressed under the receivership, and now every department of the plant is being operated on full time with a full force of employees. The financial statement shows a decided increase in the company's assets from January to October, earnings of nearly \$50,000 during the same period, and other facts. The Beaumont Iron Works is one of the leading plants of its kind in the Southwest, being equipped with the latest modern machinery for carbuilding, general iron work, etc.

Schalkenbach and Budke Structural Iron.

Structural iron work of all kinds constitutes the product of Messrs. Schalkenbach & Budke (Robert N. Schalkenbach and Geo. H.

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Budke), who announce the complete equip-
ment of their plant on the Central Railroad
of New Jersey. The firm has general offices
at 402 Claremont avenue, Jersey City, N. J.,
and is now prepared to furnish details and
submit estimates on all kinds of general and
structural iron work. The plant's output
will include bridge work, roof trusses, angle
iron and I beams, steel towers and tanks,
boiler stacks, concrete forms, dumping buck-
ets, calisson and mining buckets, skips and
scale boxes, wheel and hand barrows, ma-
chinery trucks, car and wagon bodies, coal
chutes, coal and sand screens, tie rods,
anchor bolts, turnbuckles, etc.

National Roofing Co. Is Exporting.

Encouraged by the success which its min-
eral asphalt roofing and paint has met
throughout the United States for nearly 20
years past, the National Roofing Co. of
Tonawanda, N. Y., has entered the export
field. Several foreign shipments have been
made, and the company has a permanent ex-
port department. Details have been planned
to meet the requirements of foreign buyers,
and especial attention is being given to fur-
nishing material suitable for any construc-
tion and adapted to the climatic conditions
of the various foreign countries which have
become interested in the National products.
The sales manager in charge of this export
department is conversant with English, Ger-
man, French, Italian Spanish and Portu-
guese, and is therefore fully equipped to
correspond with foreign purchasers.

In Honor of Ampere.

A bronze and tile memorial tablet in honor
of Andre Marie Ampere, the French scien-
tist, has been installed by Dr. Schuyler
Skaats Wheeler in the Lackawanna Railway
station at Ampere, N. J. This memorial
was unveiled on December 3 by the French
Ambassador, who came from Washington
especially for the occasion. He and Dr.
Wheeler made addresses of interest. The
tablet reads: "In honor of Andre Marie
Ampere, who founded the science of electro-
dynamics and whose name is used through-
out the world to designate the unit of elec-
tric current. Born at Lyons, 1775. Died at
Marseilles, 1836. Erected October, 1908, by
the Crocker-Wheeler Co. at Ampere, New
Jersey." It is believed that this tablet is
the only memorial to Ampere's honor in
America and that Ampere, N. J., is the only
place in the world named for him.

Heat Insulation of Dwelling-Houses.

Formerly it was thought necessary to rely
on the heating arrangements entirely to
keep houses warm in winter. The problem
was to obtain enough heat from hot-air fur-
naces, steam radiator or other means to
keep the temperature within doors right and
comfortable, however low the mercury out-
side or however fiercely the winds might
blow against walls and windows. It was
realized that honest construction, by check-
ing the loss of heat, made it easier to keep
an even temperature. This method of build-
ing a comfortable house usually took the
form of thick brick or stone walls or, in
wooden houses, of heavy framing, but any-
thing like the protection of the building by
really insulating its walls was until recently
given no attention. The use of mineral wool
is a solution of this problem. By simply
filling the space between the inner and
outer surfaces of walls and roofs with this
substance (non-absorbent of moisture, fire-
proof, sound-proof, insect-proof and inex-
pensive) a house of ordinarily good con-
struction is as well protected as though
made with thick walls, and at far less ex-
pense. The house equipped with the ma-
terial is genuinely insulated against ex-
tremes of temperature so as to be not only
warm in winter but also cool in summer.
The U. S. Mineral Wool Co., 140 Cedar St.,
New York, manufactures mineral wool.

TRADE LITERATURE.

Interesting Oil Filter Data.

"Efficient Bearings" is the title of a pub-
lication written by John B. Beall, vice-
president and general manager of the Frank-
lin Oil Filter Co., 308 North Commercial
St., St. Louis. The publication presents in-
teresting data in lubricating oil and filters.

Air Compressors for Industrial Ser- vice.

Compressed air has by no means been used
to the extent justified by its especial adapta-
bility for performing certain classes of work.
This subject is referred to in publication
No. 386, issued by the National Brake &
Electric Co., Milwaukee, Wis. The pam-
phlet includes various photographic views of
the company's air compressors, fully de-
scribed by the accompanying text. "Air

Compressors for Industrial Service" is the
title, and it aptly conveys an idea of the
timely data which it contains.

Electric Literature From Fort Wayne

"A Practical Guide for Transformer Test-
ing" is the title of an illustrated pamphlet
(No. 5016) published by the Fort Wayne
Electric Works, Fort Wayne, Ind. As indi-
cated by its title, the publication is a treat-
ise on transforming testing, and its 50 pages
are replete with facts, figures, tables and
blank forms of interest to all who are con-
cerned with the testing of transformers.
The company has also issued Bulletin No.
1109, which supersedes 1080, and refers to
multiphase alternators (revolving field, en-
gine driven), of which photographic views
are presented.

The Buckeye Tungsten Lamp.

Efficiency and economy in the use of elec-
tric lamps are considerations which strongly
appeal to users of and dealers in these ar-
ticles. That the Buckeye tungsten lamp pos-
sesses these qualities, together with other
good ones, is shown by facts which are pre-
sented in a folder illustrative and descrip-
tive of the lamp. The contention is made
that this lamp is a paying investment for
any plant whose generating cost is over one
and one-half cents per kilowatt, and will in-
crease any central station's income. The
lamp is manufactured by the Buckeye Elec-
tric Co., Cleveland, Ohio.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites infor-
mation about Southern financial matters,
items of news about new institutions, divi-
dends declared, securities to be issued, open-
ings for new banks, and general discussions
of financial subjects bearing upon Southern
matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., December 16.

The Baltimore stock market continued
active during the past week, with prices
generally firm. In the trading United
Railways incomes sold from 53½ to 53;
the funding 5s from 80½ to 79½, with
last sale at 79; do. funding scrip from
80½ to 78½; United 4s, 85½ to 85½;
Consolidated Gas, Electric Light & Power
preferred, 79½ to 79; do. 4½s from 82½
to 83½; Consolidated Gas 6s, 104½ to
104½; do. 5s, 112½ to 112½; do. 4½s, 94 to 94½;
Seaboard Company common, 11 to 12; do.
first preferred, 48; do. second preferred,
21 to 22; Seaboard 4s, 63½ to 62½; do.
10-year 5s, 94½; do. three-year 5s, 94½
to 94½; Consolidated Cotton Duck com-
mon, 7½ to 7½; do. preferred, 26; Cot-
ton Duck 5s, 79½ to 79; G.-B.-S. Brew-
ing common, 3½; do. incomes, 16 to 16½;
do. 1sts, 47½ to 46½.

Bank stock sold as follows: Union,
125; Maryland, 19; Mechanics', 26; Citi-
zens', 37½; Third National, 130.
Mercantile Trust sold from 137 to 135,
last sale at 136; United States Fidelity,
110 to 112; Fidelity & Deposit, 148½;
Continental Trust, 185 to 187; American
Bonding, 55 to 60; Colonial Trust, 27½;
Maryland Casualty, 76½ to 77.

Other securities were traded in thus:
Northern Central Railway stock, 100 to
100½; Baltimore Brick common, 2;
George's Creek Coal & Iron, 78; Atlantic
Coast Line 4s, 95½ to 96½; do. South
Carolina 4s, 98½; Charleston & Western
Carolina 5s, 107½ to 107½; City & Sub-
urban 5s, Baltimore, 110½ to 109½;
Georgia & Alabama Consolidated 5s, 104
to 105; Georgia Pacific 1sts, 117½; Nor-
folk Street Railway 5s, 107½ to 108; Wil-
mington & Weldon 4s, 100; Virginia de-
ferred, Brown Bros. certificates, 45 to
46½; Alabama Consolidated Coal & Iron
common, 37 to 38; Atlantic Coast Line
new 4s, certificates, 79½ to 79; Baltimore,
Catonsville & Ellicott Mills 5s, 105; Bal-
timore, Sparrows Point & Chesapeake
4½s, 93; Seaboard & Roanoke 5s, 108;
Baltimore Electric 5s, stamped, 86 to
85½; Maryland Telephone 5s, 94½;
Western Maryland Railroad stock, 7½ to
8½; Carolina Central 4s, 92½; Georgia,
Carolina & Northern 5s, 106½ to 106;
Washington Terminal 3½s, 94; Western
Maryland Railroad 4s, 80 to 80½; do. 2d
4s, 55½; West Virginia Central 6s, 105;
Norfolk City 4s, 1931, 95½; Baltimore
Electric preferred, 35; Columbia & Green-
ville 1sts, 110½ to 111½; Savannah,
Florida & Western 5s, 113; Consolidation
Coal, 92 to 96; Colorado Southern refund-
ing 4½s, 90; Maryland & Pennsylvania
incomes, 62½ to 62; Baltimore City 3½s,
1940, 97½; Alabama Consolidated Coal &

Iron 5s, 84½; Houston Oil common, 7½
to 8; Memphis Street Railway 5s, 96½;
Florida Southern 4s, 93½; Virginia Mid-
land 4ths, 106; Atlantic Coast Line of
Connecticut 5s, certificates, 100; Bal-
timore Traction 5s, 111½; Macon Railway
& Light 5s, 95; Wilmington, Columbia &
Augusta 6s, 102½; Colorado Southern 4s,
96½ to 96½; Georgia Southern & Florida
5s, 107½; Baltimore City 4s, 1955, 103.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
December 16, 1908.

Railroad Stocks.	Par	Bid.	Asked.
Atlantic Coast of Conn.	100	244	250
Georgia Southern & Florida	100	21	21
Georgia South. & Fla. 2d Pfd.	100	66	68
Norfolk Railway & Light	25	18½	18½
Seaboard Co. Com.	100	11½	12½
Seaboard Co. 1st Pfd.	100	50	50
Seaboard Co. 2d Pfd.	100	21½	23
United Ry. & Elec. Co.	50	11	11½
Western Maryland	50	8½	8½

Bank Stocks.	Par	Bid.	Asked.
Citizens' National Bank	10	37	38
Farmers & Mer. Nat'l Bank	40	50	50
First National Bank	100	130	135
Maryland National Bank	20	18	21
Merchants' National Bank	100	165	165
National Bank of Baltimore	100	120	122½
National Union Bank of Md.	100	124½	124½
Third National Bank	100	125	125
Western National Bank	20	34½	34½

Trust, Fidelity and Casu- ality Stocks.	Par	Bid.	Asked.
American Bonding Co.	25	58	65
Colonial Trust	50	100	100
Continental Trust	50	147½	150
Fidelity & Deposit	50	147½	150
Maryland Casualty	25	76½	78
Maryland Trust	100	60	60
Merc. Trust & Deposit	50	135	137
Union Trust	50	61	61
U. S. Fidelity & Guaranty	100	110½	110½

Miscellaneous Stocks.	Par	Bid.	Asked.
Ala. Con. Coal & Iron	100	37½	38
Ala. Con. Coal & Iron Pfd.	100	72½	80
Con. Cotton Duck Com.	50	7½	8
Con. Cotton Duck Pfd.	50	27½	27½
Con. Gas, Elec. Lt. & P. Com.	100	30	33
Con. Gas, Elec. Lt. & P. Pfd.	100	78½	79½
Consolidation Coal	50	93	96
G.-B.-S. Brewing Co.	100	3½	3½

Railroad Bonds.	Par	Bid.	Asked.
Atlanta & Birmingham 4s.	80	82	82
Atlanta & Charlotte Ext. 4½s.	100	96	96½
Atlantic Coast Line 1st 4s, 1902.	100	96	96½
Atlantic C. L. New 4s, Ctr.	79	80	80
Atlantic C. L. Com. 4s, Ctr.	84	84	84
Atlantic C. L. (Conn.) 4s.	80	83	83
Birmingham Term. 1st Gtd.	89	91	91
Carolina Central 4s, 1919.	90	93	93
Charleston & West. Car. 5s, 1916.	106	106	106
Charlotte, Col. & Aug. 1st 5s, 1910.	107	108½	108½
Coal & Iron Railway 5s, 1920.	102½	104	104
Cumberland & Penn. 5s.	104½	104½	104½
Col. & Green. 1st 6s, 1915.	100	110½	110½
Florida Con. & Penin. 5s.	100	93½	94½
Florida Southern 4s, 1915.	104½	105	105
Georgia & Ala. Terminal 5s.	106½	106½	106½
Georgia, Car. & North. 1st 5s, 1920.	106	107	107
Georgia Pacific 1st 6s, 1922.	117	117½	117½
Georgia South. & Fla. 1st 5s, 1915.	107	108	108
Knoxville & Ohio 6s.	110	110½	110½
Petersburg Class A 5s, 1926.	109	109½	109½
Piedmont & Cum. 1st 5s, 1911.	104½	104½	104½
Potomac Valley 1st 5s, 1911.	101	102½	102½
Raleigh & Augusta 1st 6s, 1926.	117½	117½	117½
Richmond & Danville Gold 6s, 1915.	111½	112½	112½
Savannah, Fla. & West. 5s, 1934.	113	113	113
Seaboard Air Line 4s, 1950.	62½	63	63
Seaboard Air Line 5s, 10-yr., 1911.	94½	94½	94½
Seaboard Air Line 5s, 3-yr.	94½	95	95
Seaboard & Roanoke 6s, 1916.	102	102	102
Seaboard & Roanoke 5s, 1926.	108½	108½	108½
South Bond 5s, 1911.	104½	106½	106½
Washington Terminal 3½s.	94	94	94
Western Maryland 4s, 1952.	79½	79½	79½
Western Maryland 2d 4s.	60	60	60
Western N. C. Con. 6s, 1911.	109	109	109
W. Va. Cent. 1st 6s, 1911.	105	105	105
W. Va. Col. & Aug. 6s, 1910.	102½	102½	102½
Washington & Vandemere 4½s.	98½	98½	98½

Street Railway Bonds.	Par	Bid.	Asked.
Anacostia & Potomac 5s, 1919.	101½	101½	101½
Augusta Ry. & Elec. 5s, 1940.	99½	101	101
Balto. City Pass. 5s, 1911.	101½	102	102
Balto. City Pass. 4½s.	101½	101½	101½
Balto. S. P. & Ches. 4½s.	92½	93	93
Balto. Ry. Con. 5s (Balto.), 1932.	111	111½	111½
Central Ry. Ext. 5s (Balto.), 1932.	111	111	111
Charleston City Ry. 5s, 1923.	106½	107½	107½
Charleston Con. Elec. 5s, 1909.	90	90	90
City & Suburban 5s (Balto.), 1922.	110	110	110
Knoxville Traction 1st 5s, 1928.	104½	104½	104½
Lexington Railway 1st 5s, 1919.	95	95	95
Macon Ry. & Lt. 1st Con. 5s, 1953.	95	95½	95½
Memphis Street Railway 5s.	95½	96½	96½
Newport News & Old Pt. 3s, 1938.	90	90	90
Norfolk Railway & Light 5s.	95	95	95
Norfolk Street Railway 5s, 1944.	107½	107½	107½
United Railways 1st 4s, 1919.	85½	86	86
United Railways Inc. 4s, 1919.	52½	52½	52½
United Railways Funding 5s.	78½	78½	78½

Miscellaneous Bonds.	Par	Bid.	Asked.
Ala. Con. Coal & Iron 5s.	82½	82½	82½
Atlanta Gas 1st 5s, 1917.	101	101	101
Baltimore Electric 5s, 1926.	85	85½	85½
Brush Electric 5s.	106	106	106
Consolidated Gas 6s, 1910.	104½	104½	104½
Consolidated Gas 5s, 1929.	112	113	113
Consolidated Gas 4½s.	94	94½	94½
Con. Gas, Elec. Lt. & P. 4½s.	82½	84	84
G.-B.-S. Brewing 1st 4s.	46½	47½	47½
G.-B.-S. Brewing Income 5s.	16	16½	16½
Maryland Telephone 5s.	94	95	95
Mt. Vernon Woodby Cot. Duck 5s.	79½	79½	79½
United Elec. Lt. & P. 4½s.	95	97	97

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S.
Glenn, Broker, Spartanburg, S. C.,
for Week Ending December 14.

	Par	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	75	75	75
Alken Mfg. Co. (S. C.)	82	82	82
American Spinning Co. (S. C.)	145	150	150
Anderson Cotton Mills (S. C.)	70	70	70

Arcadia Mills (S. C.)	90	90
Arkwright Cotton Mills (S. C.)	100	105
Augusta Factory (Ga.)	65	70
Avondale Mills (Ala.)	110	126
Belton Mills (S. C.)	116	116
Brandon Mills (S. C.)	122	122
Cabarrus Cotton Mills (N. C.)	120	130
Chadwick Mfg. Co. (N. C.) Pfd.	103	108
Chiquola Mfg. Co. (S. C.)	127	127
Clifton Mfg. Co. (S. C.)	103	103
Clifton Mfg. Co. (S. C.) Pfd.	99	105
Clinton Cotton Mills (S. C.)	99	105
Columbus Mfg. Co. (Ga.)	97	97
Courtenay Mfg. Co. (S. C.)	97	97
Dallas Mfg. Co. (Ala.)	90	95
Darlington Mfg. Co. (S. C.)	70	75
Converse Co., D. E. (S. C.)	112	112
Drayton Mills (S. C.)	100	100
Eagle & Phoenix Mills (Ga.)	120	127
Easley Cotton Mills (S. C.)	145	150
Enoree Mfg. Co. (S. C.)	65	75
Enoree Mfg. Co. (S. C.) Pfd.	100	100
Enterprise Mfg. Co. (Ga.)	82	90
Exposition Cotton Mills (Ga.)	240	240
Gaffney Mfg. Co. (S. C.)	65	70
Gainesville Cotton Mills (Ga.)	50	50
Granby Cot. Mills (S. C.) 1st Pfd.	45	45
Graniteville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	90	90
Grendel Mills (S. C.)	109	118
Hartselle Cotton Mill (S. C.)	125	125
Henrietta Mills (N. C.)	160	175
Inman Mills (S. C.)	105	110
Lancaster Cotton Mills (S. C.)	110	125
Lancaster Cot. Mills (S. C.) Pfd.	91	96
Langley Mfg. Co. (S. C.)	91	96
Laurens Mills (S. C.)	148	148
Limestone Mills (S. C.)	141	141
Lockhart Mills (S. C.)	85	85
Lockhart Mills (S. C.) Pfd.	95	95
Loray Cotton Mills (N. C.) Pfd.	90	90
Marlboro Cotton Mills (S. C.)	80	80
Mills Mfg. Co. (S. C.)	100	100
Molokoh Mfg. Co. (S. C.)	95	100
Monaghan Mills (S. C.)	115	115
Newberry Cotton Mills (S. C.)	98	98
Newberry Cotton Mills (S. C.)	115	115
Ninety-Six Cotton Mills (S. C.)	115	115
Norris Cotton Mills (S. C.)	120	120
Odell Mfg. Co. (N. C.)	90	90
Olympia Cotton Mills (S. C.)	68	68
Orr Cotton Mills (S. C.)	104	104
Pacolet Mfg. Co. (S. C.)	160	160
Pacolet Mfg. Co. (S. C.) Pfd.	97	100
Pelzer Mfg. Co. (S. C.)	168	168
Piedmont Mfg. Co. (S. C.)	175	180
Pos Mfg. Co., F. W. (S. C.)	125	130
Saluda Mills (S. C.)	122	125
Sibley Mfg. Co. (Ga.)	142	142
Spartan Mills (S. C.)	135	135
Trion Mfg. Co. (Ga.)	132	140
Tucupau Mills (S. C.)	200	200
Union-Buffalo (S. C.) 1st Pfd.	60	60
Victor Mfg. Co. (S. C.)	122	130
Warren Mfg. Co. (S. C.)	92	93
Warren Mfg. Co. (S. C.) Pfd.	100	100
Washington Mills (Va.)	35	35
Washington Mills (Va.) Pfd.	100	110
Watts Mills (S. C.)	140	140
Woodruff Cotton Mills (S. C.)	135	135
Woodruff Cotton Mills (S. C.)	122	122
Woodside Cotton Mills (S. C.)	104	104
Watts Mills (S. C.)	97	97
Williamston Mills (S. C.)	104	104

Warren Mfg. Co. Pfd.	100	...
Washington Mills (Va.)	25	...
Washington Mills Pfd.	100	115
Whitney Mfg. Co. (S. C.)	140	...
Williamston Mills (S. C.)	104	107
Wicasset Mills (N. C.)	125	135
Woodruff Cotton Mills (S. C.)	120	123
Woodside Cotton Mills (S. C.)	103	106

New Corporations.

Albany, Okla.—Durant and local citizens are reported to be organizing a bank with \$10,000 capital.

Alva, Okla.—The Alva Security Bank has been authorized to begin business; capital \$40,000. The officers are G. A. Harbaugh, president; J. H. Shaefer, vice-president; M. M. Fulkerson, cashier.

Bartlesville, Okla.—The Bartlesville State Bank, capital \$25,000, has been authorized to do business with E. G. Lewis, president; G. W. Lewis, vice-president, and A. E. Lewis, cashier.

Beaufort, S. C.—The Beaufort Bank is reported to have applied for a charter; capital \$25,000. The incorporators are P. M. Epstein, Chas. E. Danner, J. M. Lenquick, Chas. G. Luther, George Waterhouse, R. R. Legare, Wallace and Danner, Frederick H. Christensen, D. A. Souls, C. C. Townsend and W. J. Thomas of Beaufort and P. L. Lea of Barton.

Benton, Ark.—The J. J. Beavers Company has been incorporated with \$10,000 capital to do a banking and brokerage business. The incorporators are J. F. Lee, J. R. Gibbons, R. C. Ray, J. J. Beavers and M. F. Scott.

Blackwell, Okla.—The State Guaranty Bank has been authorized to begin business; capital \$25,000. The officers are W. A. Hays, president; L. H. Thompson, vice-president, and E. A. Lentz, cashier.

Bluefield, W. Va.—The Fidelity Banking & Trust Co., authorized capital \$300,000, has completed its organization by electing the following officers: S. M. Smith, president; Edward Cooper, first vice-president; F. L. Black, second vice-president; J. Lee Harne, cashier; Joseph M. Sanders, general counsel; directors, Edward Cooper, Coopers, W. Va.; Thos. Cooper, Salem, Va.; Dr. D. H. Thomas, Columbus, Ohio; Dr. F. L. Black, Bluefield; J. Tracy Walker, McComas, W. Va.; Judge Joseph M. Sanders, I. G. Toney, Northfork, J. Lee Harne, II. I. Shott, S. M. Smith and W. H. Thomas of Bluefield, W. Va.

Brownsville, Texas.—The officers of the Brownsville Bank & Trust Co. are W. W. Lastinger, president; J. L. Landrum, vice-president; E. A. McGary, cashier. The bank has \$60,000 capital.

Chaffee, Mo.—The Chaffee Building and Loan Association has been incorporated with \$100,000 capital by F. W. Loy, J. W. Heeb, R. W. Finley and others.

Chase City, Va.—The First National Bank has been authorized to begin business; capital \$50,000. The organizers are N. H. Williams, president; T. E. Roberts, vice-president; H. R. Cooley, assistant cashier. This is a conversion of the Bank of Chase City.

Clio, S. C.—The People's Savings Bank has been chartered with \$25,000 capital by E. L. Calhoun, Jr., president, and H. L. Galloway, secretary and treasurer.

Dallas, Texas.—The Texas Loan & Guaranty Co. has been granted a charter; capital \$500,000, with privilege of increasing to \$5,000,000. The incorporators are George W. Riddle, Dallas, president; W. E. Richards, Houston; W. T. Campbell, San Antonio, and W. G. Newby, Fort Worth, vice-presidents; directors, George S. Berry of Merkel, George S. McGhee of Tyler, W. A. Norman of Paint Rock, J. Wilmet of Ballinger, Otto von Rosenberg of Hallettsville, S. J. Eisby of Dallas, A. MacDonald of Houston, C. H. Cole of Kaufman and others.

Edgemont, Ark.—A bank is reported organized with W. W. Morgan, president;

E. T. Stanfield, vice-president, and W. T. Black, cashier.

Greenville, S. C.—The American Home Insurance Co. is being organized with \$450,000 capital by Ellison A. Smyth, Henry P. McGee, J. W. Norwood, A. A. Bristol and L. W. Parker, and Major Chas. F. Hard, who, it is stated, will be president.

Hartwell, Ga.—The People's Bank of Hartwell has made application for a charter; capital \$50,000. The organizers are B. F. Mauldin of Anderson, S. C.; I. H. McCalls of Lownsville, S. C.; T. J. Linder, A. M. Teasley, Clarence Linder and J. C. Massey of Hartwell.

Hunnell, Mo.—The Farmers and Mechanics' Bank, capital \$10,000, has been incorporated by W. B. Arnold, John W. Carr, C. L. Landrum and others.

Hawkinsville, Ga.—J. H. Taylor is reported to be organizing a new bank with from \$25,000 to \$50,000 capital.

Jackson, Ky.—The First National Bank will, it is stated, begin business about January 1 with the following directors: Judge James P. Adams, president; Walter Latin, cashier; Dr. Arnold, Judge T. P. Cardwell, John Griffith and James Hammons.

Kansas City, Mo.—The J. C. Nichols Investment Co. has been incorporated with \$50,000 capital by J. C. Nichols, Jesse Miller Nichols and Albert I. Beach.

Lincoln, Ala.—The establishment of a bank is reported under consideration by local business men.

Luling, Texas.—The Lipscomb Bank & Trust Co. has been chartered with \$50,000 capital by W. W. Lipscomb, S. J. Francis, B. F. Tiller, David Gregg and D. M. Day.

Maiden, N. C.—It is stated that the Maiden Bank will begin business about January 1 with B. M. Spratt, Jr., as cashier.

Mannsville, Okla.—The Farmers' State Bank has been granted a charter; capital \$100,000. The directors are J. B. Wall, Ardmore; J. M. Browning, Mill Creek, Okla.; P. R. Williams, Mannsville, Okla.; G. L. Browning, Mannsville, Okla.

Matoaka, W. Va.—The T. E. King Company has been chartered to do an insurance business; capital \$2500. The incorporators are D. H. Barger of Hiawatha; T. E. King and H. E. Clark of Matoaka, E. H. Easley of Bluefield, and I. B. Bell of Bluefield.

Milburn, Okla.—The Johnston County State Bank has been incorporated with \$9500 capital by James R. McKinney, B. A. McKinney and Z. W. Rains of Durant, J. W. Walker of Milburn.

Monticello, Ga.—The First National Bank has been approved; capital \$50,000. The organizers are Taney O. Benton, J. H. Kelly, M. S. Benton, L. O. Benton and E. Clyde Kelly.

Polkton, N. C.—The new bank at Polkton has organized with the following directors: W. J. McDaniel, president; J. P. Boyd, cashier; D. A. Carter, S. K. Harris, Dr. L. C. Smith, J. C. Goodman and W. T. Edwards.

Portsmouth, Va.—The First National Bank, capital \$100,000, will, it is stated, soon begin business with the following directors: John L. Watson, president, and V. Garland Weaver, cashier; O. L. Williams, A. E. Warner, H. L. Trotman, O. B. Lay, A. B. Jarvis, Andrew N. Mahoney, H. B. Wilkins, John R. Saunders, Urbanna, Va.; M. M. Crocker, P. J. Lyons, John F. Gouldman, Fredericksburg, Va.

Rowlesburg, W. Va.—The First National Bank has been authorized to begin business; capital \$25,000. George E. Rogers is president; W. W. Schoch, vice-president, and E. Carver, cashier.

Rentz, Ga.—The Bank of Rentz, capital \$25,000, will, it is stated, begin business

about January 15. Among those interested are John D. Walker of Sparta, Ga.; T. J. Traylor, H. D. Barron, B. A. Moye, R. C. Coleman, B. O. Rogers, F. M. Kirkpatrick, R. A. Ledford, J. F. Graham and others.

Rush Springs, Okla.—The First State Bank has been incorporated with \$10,000 capital by J. A. Slaton, G. W. Hill, H. P. Ellis, M. R. Ridley and M. J. Collins.

Salem, Ark.—The Bank of Salem has been incorporated with \$10,000 capital by C. S. Sailor, president; John Stone, vice-president; W. I. Blackwell, secretary; A. T. Cox, treasurer, and Andrew Valpert.

San Benito, Texas.—Reports state that a new bank is to be opened the first of the year.

Sandersville, Miss.—The Union and Farmers' Bank is reported organized with \$50,000 capital.

St. Louis, Mo.—The Realty Loan & Financial Co., capital \$20,000, has filed articles of incorporation. The stockholders are W. S. Reed, J. V. Tournay and Fred Hall.

Tellico Plains, Tenn.—Reports state that E. P. Loomis will be president and H. G. Carter of Greeneville, Tenn., cashier of the Tellico Bank & Trust Co., recently chartered with \$50,000 capital.

Walnut Ridge, Ark.—The First National Bank has been approved; capital \$25,000. The organizers are T. J. Sharum, W. G. McClamrock, T. C. Neece, F. W. Tucker, Ben F. Graff and W. R. Lane.

Whitney, Texas.—Local parties are reported to be organizing a \$60,000 national bank.

New Securities.

Austin, Texas.—Local reports state that arrangements are being made to offer for sale the \$200,000 of Travis county road and bridge bonds recently approved.

Birmingham, Ala.—Notice is given that \$26,000 of 6 per cent. 10-year improvement bonds are to be issued. Geo. B. Ward is Mayor.

Bristol, Tenn.—The \$60,000 of City Hall bonds were purchased by the Third National Bank of Cincinnati at a premium of \$1034.84.

Cameron, Texas.—It is reported that the Milam county permanent school fund has purchased at par \$53,072.50 of 4 per cent. 40-year Milam county bridge and refunding bonds.

Chattanooga, Okla.—The State Auditor has registered \$25,000 of water-works bonds.

Chattanooga, Tenn.—Application will be made to the Legislature in January by Hamilton county, it is stated, for authority to issue \$100,000 of school bonds.

Chickasha, Okla.—Woodin, McNear & Moore of Chicago have been awarded at private sale \$90,000 of 5 per cent. 20-year school bonds.

Clarendon, Texas.—The city has voted \$25,000 of sewer bonds.

Clarksburg, W. Va.—An election is to be held January 18 to vote on \$120,000 of 5 per cent. 30-year water-works and sewerage bonds.

Claude, Texas.—The Attorney-General has approved \$2500 of 5 per cent. 15-20-year bonds of Armstrong county common school district No. 5.

Clinton, N. C.—D. M. Partrick of Clinton is reported to have been awarded at a premium \$10,000 of 5 per cent. 10-year Sampson county road bonds.

Covington, Ky.—Reports state that \$75,000 of 4 per cent. school district bonds have been awarded at a premium of \$937.50 to the German National Bank of Covington.

Dallas, Texas.—Reports state that after the first of the year it is probable the city will offer for sale \$25,000 of industrial school bonds.

Daytona, Fla.—The MANUFACTURERS' RECORD is informed that bids will be received until 2 P. M. January 11 by F. N. Conrad, secretary Board of Public Works, for \$50,000 of 5 per cent. 30-year water-works bonds.

Dothan, Ala.—An election is to be held in Houston county January 4 to vote on \$100,000 of 5 per cent. 20-year road bonds.

Douglas, Ga.—The election held in Coffee county to vote on \$100,000 of road bonds failed to carry.

El Paso, Texas.—El Paso county has voted \$275,000 of road and jail bonds.

Enid, Okla.—The city has voted \$125,000 of water-works and \$125,000 of sewer bonds.

Florence, Ala.—The City Council has authorized an issue of \$15,000 of bonds to pay off floating indebtedness.

Gadsden, Ala.—It is reported that an election will be held to vote on another \$50,000 of bonds to complete water-works system.

Gastonia, N. C.—Bids will be received until 3 P. M. December 15 by A. C. Myers, cashier of the Citizens' National Bank of Gastonia, for \$200,000 of 4 per cent. 30-year Gaston county road-improvement bonds.

Greeneville, Tenn.—An election is to be held January 9 to vote on \$15,000 of water-works and \$25,000 of street-improvement bonds.

Guyandotte, W. Va.—It is reported that Weil, Roth & Co. of Cincinnati purchased last month at a premium of \$520 the \$26,000 of 4 per cent. paving and sewer bonds.

Hattiesburg, Miss.—Bids will be received until 6 P. M. January 4 for \$20,000 of 5 per cent. 25-year Forrest county road and bridge bonds. T. E. Batson is clerk Board of Supervisors.

Iva, S. C.—John Nuveen & Co. of Chicago are reported to have purchased at 105.62 the \$10,000 of 6 per cent. 20-year school district bonds.

Jackson, Ga.—An election is to be held in Butts county January 11 to vote on \$10,000 of road bonds.

Kansas City, Mo.—A bill providing for the sale of \$250,000 of water-works bonds voted two years ago has been introduced in the City Council.

Kaufman, Texas.—The bonds voted December 1 for water-works amount to \$6000.

Knoxville, Tenn.—Ordinances have been prepared providing for the issuing of \$1965.45 of bonds of Improvement District No. 23 and \$1810.50 of bonds of Improvement District No. 22; interest at 6 per cent. John M. Brooks is Mayor.

Latonia, Ky.—Reports state that \$11,300 of 6 per cent. 5-10-year street-improvement bonds have been sold to Joe Carley at par.

Lexington, Ky.—The Chas. A. Peeling Company of New York has been awarded at \$2110 premium the \$25,000 of 4½ per cent. 40-year sewer bonds.

Lexington, Ga.—The election held in Oglethorpe county December 5 to vote on \$50,000 of 5 per cent. road and bridge bonds failed to carry.

Mason, Texas.—Mason county is reported to have under consideration \$40,000 of courthouse bonds.

Memphis, Tenn.—All bids received December 10 for the \$1,000,500 of 4 per cent. water bonds were rejected. Later reports state that new bids will be received until 2.30 P. M. December 28. Ennis M. Douglas is City Register.

Moorehead, Miss.—An issue of \$10,000 of school-building bonds has been voted.

Nashville, Tenn.—Local reports state that a bill is to be introduced in the General Assembly providing for between \$200,000 and \$500,000 of bonds for improve-

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\$20,000 N. C. State 6s, 1919.
 \$20,000 N. C. State 4s, 1910.
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 JOHN B. H. DUNN, Asst. Cashier.

Capital, \$1,500,000

Surplus and Profits, - - - \$900,000
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 Carroll Van Ness.....Treasurer
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New Orleans, La.—It is stated that bids for \$3,000,000 of levee bonds will be opened about January 15.

New Orleans, La.—Bids will be received by Jules C. Koenig, president Board of Commissioners of the Orleans Levee District, until 2 P. M. January 15 for \$2,756,000 of bonds of the Orleans Levee District.

Norfolk, Va.—James C. Riddick, Mayor, is reported to have vetoed the ordinance for the sale of \$60,000 of street-improvement bonds at par to the Westover Company.

Norfolk, Va.—Local reports state that the American Telephone & Telegraph Co. has sold \$50,000,000 of its 4 per cent. convertible bonds to a syndicate composed of J. P. Morgan & Co., Kuhn, Loeb & Co., Kidder, Peabody & Co. and Baring Bros. & Co., Ltd., of London.

Olanta, S. C.—Bids will be received until noon January 1 by R. I. Moore, chairman of the board of trustees of school district No. 21, for \$5000 of 30-year bonds.

Oklmulgee, Okla.—Reports state that an election will probably be held to vote on \$200,000 of sewer, water extension, City Hall and school bonds.

Palatka, Fla.—The city is offering for sale \$50,000 of 5 per cent. bonds. E. S. Crill is chairman board of bond trustees.

Pecos, Texas.—The Attorney-General has approved \$5000 of 5 per cent. 20-year bonds of common school district No. 4, Reeves county.

Providence, La.—Bids will be received by T. J. Powell, Mayor, until 5 P. M. January 5 for \$27,000 of 5 per cent. water and light funding bonds.

Rockingham, N. C.—The MANUFACTURERS' RECORD is informed that on January 4 the commissioners of Richmond county will sell \$15,000 of 6 per cent. 30-year road bonds of Marks Creek township. B. F. Reynolds is clerk.

Seneea, S. C.—Reports state that the \$25,000 of 5 per cent. 20-40-year water and light bonds recently voted have been sold at private sale.

Seymour, Texas.—The 4 per cent. 5-10 year bonds recently voted are for the following purposes: Water-works, \$28,000; sewers, \$12,000.

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Shawnee, Okla.—The election to vote on \$120,000 of school district, \$125,000 street improvement, \$50,000 convention hall and \$20,000 of hospital bonds is to be held December 28.

St. Joseph, Mo.—It is stated that \$10,000 of City Hall and \$10,000 of police-station bonds, same being part of the \$400,000 issued November 14, have been refused by Lee, Higginson & Co. of Boston. It is further stated that unless the purchasers

Office of
VIRGINIA-CAROLINA CHEMICAL CO.,
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DIVIDEND NO. 53.

The Board of Directors have this day declared a dividend of TWO (2%) PER CENT., the same being consecutive quarterly dividend No. 53, on the preferred stock of this Company, payable Jan. 15, 1909, when checks will be mailed to all preferred stockholders of record at the close of business on Dec. 31, 1908.

Books for the transfer of preferred stock will be closed from 3 P. M. Dec. 31, 1908, to 10 A. M. Saturday, Jan. 16, 1909.
S. W. TRAVERS, Treasurer.

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take the entire issue the bonds will be re-advertised.

St. Petersburg, Fla.—The City Council has passed a resolution to issue \$100,000 of bonds for channel improvements.

Sweetwater, Texas.—An election is to be held, it is stated, to vote on \$24,000 of bonds, \$4000 being for City Hall and fire station and \$20,000 for street improvements.

Tallapoosa, Ga.—The question of issuing bonds for water plant and sewer system is being considered.

Tavares, Fla.—It is reported that the election called for December 5 to vote on \$200,000 of 4 per cent. 50-year Lake county road bonds has been postponed.

Temple, Texas.—The city authorities are preparing to retire \$40,000 of 6 per cent. bonds of the Temple Water-Works Co. by a new issue. An offer from a Chicago banking-house to exchange the old securities for new 5 per cent. 20-40-year bonds, and in addition pay a 1½ per cent. premium and supply the engraved blank bonds is being considered.

Texarkana, Texas.—A. B. DeLoach, Mayor, writes the MANUFACTURERS' RECORD confirming the report that Precinct No. 1 has issued \$125,000 of street and road-improvement bonds, \$75,000 to be spent within the city limits.

Texarkana, Texas.—A. B. DeLoach, Mayor, informs the MANUFACTURERS' RECORD that on December 29 the city will

vote on bonds for the following purposes: School sites and buildings, \$125,000; city jail, \$5500; fire station, \$2500; street improvements, \$3000.

Vernon, Texas.—Bids will be received by R. B. Sherrill, city secretary, until 2.30 P. M. December 18 for \$15,000 of water-works, \$10,000 of high-school, \$10,000 of sewer and \$5000 of City Hall 4 per cent. 3-25-year bonds.

Vicksburg, Miss.—The \$12,000 of Warren county road and bridge bonds purchased last month by the Vicksburg Savings Bank are 5-20-year 5 per cents.

Wauchula, Fla.—Reports state that \$15,000 of school district building bonds have been sold.

Wheeling, W. Va.—Bids will be received until January 5 for \$695,000 improvement bonds. Lawrence E. Sands, Louis E. Stifel and Baird Mitchell, commissioners of loan of 1908.

Wilmington, N. C.—N. H. Harris & Co. have purchased at a premium of \$13,272 the \$400,000 of 4½ per cent. water-works and sewerage bonds. John J. Fowler is city clerk and treasurer.

Yoakum, Texas.—The Attorney-General has approved \$32,000 of 5 per cent. 40-year schoolhouse bonds.

At Daytona, Fla., bids will be received until 2 P. M. January 11 for \$50,000 of 5 per cent. 30-year water-works bonds. Further particulars will be found in the advertising columns.

At Rockingham, N. C., \$15,000 of 6 per cent. 30-year bonds of Marks Creek township, Richmond county, will be sold on January 4. Further particulars will be found in the advertising columns.

Financial Notes.

It is reported that about \$125,000 of Tennessee State bonds will be redeemed early in January.

It is reported that the headquarters of the Georgia Fire Insurance Co. is to be removed from Cedartown to Atlanta, Ga.

The Bank of Troy at Troy, S. C., is reported to have filed an amendment to its charter to increase its capital from \$15,000 to \$25,000.

The Five-Cent Savings Bank is reported to have filed an application to amend its charter to increase its capital from \$10,000 to \$15,000. Dr. L. Hill, Jr., is president.

The Farmers and Merchants' Bank of Newton, N. C., is now occupying its new building on the corner of College street and the Square. Dr. J. H. Young is president.

The Virginia-Carolina Chemical Co. of Richmond, Va., has declared a quarterly dividend of 2 per cent. on its preferred

stock, payable January 15, 1909. S. W. Travers is treasurer.

Reports from Washington, D. C., state that Senator Elkins of West Virginia and a syndicate of local and New York interests have purchased control of the American National Bank of Washington.

At a meeting of the Oklahoma State bankers at Muskogee December 7 the Oklahoma Bankers' Association was organized and divided into five groups, with the following officers: President, J. B. Jones, Muskogee; vice-president, W. S. Guthrie, Oklahoma City; secretary, W. E. Gordon, Tulsa; treasurer, J. B. Ferguson, Enid. Group officers: Western group, O. H. Calky, president; W. J. Barber, vice-president, and F. A. Vickery, secretary; Northern group, C. C. Smith, Enid, president; T. H. Grunnell, Okene, vice-president; E. A. Pendarious, Enid, secretary; Eastern group, J. H. McBirney, Tulsa, president; F. S. Westfall, Sapulpa, vice-president; B. J. Burke, Claremore, secretary; Southern group, Dr. R. M. Hailey, McAlester, president; Harold Wallace, Ardmore, secretary; E. A. Milan, McAlester, vice-president.

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1 Seagoing Tug, "Dewitt C. Ivens," total length 91', beam 19', draft 9', steel boiler 11'3"x13'2", condensing engine 15"x30"x32", 500 H. P., speed 11 knots.

We have also for sale at our plant at Hull, Fla., the following machinery and equipment:

1 Stern-Wheel Towing Steamer "Phoenix," length 82', beam 17'4", draft 4'6", 44 tons net; engines 8x54", Scotch marine boiler 72" diam., 12' long; surface condenser, circulating pump, feed pumps, metallic life-boat, tender, etc. Price \$10,000.
1 Gasoline Launch, 35' long, 8' beam, standard engine, speed 8 knots, large, roomy cabin, refrigerator, kitchen, toilet-room; thoroughly overhauled; good condition.

12 Lighters, capacity 130 tons each, each \$1000
1 Lighter, capacity 200 tons..... 1200
1 Water Lighter, 15,000 gal..... 1200
15 Lighters, 17 to 20 tons capacity. Price \$200 to \$350 each.

4 Westinghouse Non-condensing Compound Engines, 100 H. P.
4 Porter Center-crank Engines, 12x16, 50 to 60 H. P.

1 Watertown Center-crank Engine, 90 H. P.
1 pair Engines for steamboat, 8"x36".
1 pair Engines for steamboat, 9"x36".

1 Scotch Marine Boilers, 125 H. P.
1 Scotch Marine Boiler, 100 H. P.
1 Scotch Marine Boiler, 90 H. P.

4 Economic Locomotive Type Boilers, 60 H. P. These engines and boilers are in good condition; boilers inspected by the Hartford Boiler Insurance Co.

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Everybody's..... 1.50	\$5.60
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McClure's..... 1.50	\$5.35
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With Ladies' World, Farm and Home, Good Literature and Paris Modes and Patterns, \$4.00.

With Ladies' World, Pictorial Review, Modern Priscilla, \$4.35.

With McClure's and Modern Priscilla, \$4.80.

With McClure's and Woman's Home Companion, \$4.85.

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Co. 89 Monarch Road Roller Co. 89 Monitor Stm. Gens'r Mfg. Co. 20 Monumental Iron & Metal Co. 85 Moore & Handley Hdw. Co. 86 Moran, Albert Stm. Joint Co. 103 Morris, Charles A. 103 Morris Machine Wks. 103 Morris, O. J. 77 Morse Chain Co. 17 Morse, Wm. M. 17 Morse, Williams & Co. Mach. Co. 37 Mundt & Sons, Chas. 17 Murat & Co. 18 Murray Iron Works Co. 5 Myers & Bro., F. E. 102	N Nantz Clock Co., B. 2 Nashville Hardwood Floor Co. 1 Nathan Mfg. Co. 79 National Can Co. 79 National Exchange Bank of Baltimore, Md. 75 National Heating Eng. Co. 29 National Iron Bending Co. 75 National Lumber & Crockery Co. 83 National Metal Roofing Co. 28 National Pipe Works 35 National Pipe Bending Co. 19 National Roofing Co. 34 National Tube Co. 79 Naylor & Co., S. E. 83 New Albany Mfg. Co. 13 N. J. Car Spring & Rub. Co. 14 N. J. Wire Cloth Co. 35 Newman Machine Co. 107 New Orleans Roof & Light Wks. 35 Newport Iron Shipbuilding & Dry Dock Co. 2 New St. Charles Hotel 111 New York Cent. Jewell Fil. Co. 20 New York Revolving Portable Elevator Co. 17 N. Y. Switch Co. 86 Niagara Falls Met. Stam. Wks. 28 Nicholson File Co. 44 Nicholson File Co. Exchange 95 Norfolk & Southern Ry. Co. 110 Norfolk & Western Ry. 1 North American Metal Co. 15 North Carolina Granite Corp. 19 Northern Elevator Co. 114 Northern Engineering Works 93 Northwestern Expanded Metal Co. 26 Norton Co. 95 Norwalk Mfg. Co. 75 Nuveen & Co., John 75	O Ober Mfg. Co. 107 O'Brien, Frank E. H. 85 Ohio Elevator & Machine Co. 33 Ohio Laundry Mch. Co. 112 Old Dominion Land Co. 116 Old Mfg. Co., The Wm. F. 8 Olsen, Ole K. 99 Otis Elevator Co. 17 Oswego Bridge Co. 82	P Packard, Mark 75, 76 Page Engineering Co. 99 Park Mfg. Co. 16 Parsons Co., E. C. 109 Patent Vulcanite Roof Co. 34 Paulson, Linkrum & Co. 76 Paxson Co., J. W. 41 Peace River Phosphate Mining Co. 77 Peacock's Iron Works 87 Peck-Hammond Co. 95 Penberthy Injector Co. 95 Penniman & Fairley 18 Pennsylvania Steel & Pulley Co. 18 Pennrodocke, E. L. 18 Perrin & Co., Wm. 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G. 16 Sprague Gauging Mch. Co. 11 Standard Fire Exting. Co. 111 Standard Paint Co. 33 Standard Roll Bearing Co. 12 Standard Scale & Supply Co. 116 Standard Steel Works 91 Standard Typewriting Co. 19 Star Expansion Bolt Co. 40 Starr Co., B. F. 43 Starratt Co., L. S. 41 Steel Bar, care of Mfrs. Record 86 Steel Rail Supply Co. 87 Steele & Sons, J. C. 83 Steele & Sons Co., Wm. 19 Stephens, Barrett H. 18 Stevens Arms & Tool Co., J. C. 2 Stevens' Sons Co., H. 87 St. Louis Portland Cement Co. 22 Stockell-Myers Hardware Co. 15 Stone City Steel Construc. Co. 30 Stone Printing & Mfg. Co. 79 Stone & Webster Engineering Corporation 20 Straight Creek Coal & Coke Co. 44 Stroudsburg Engine Works 99 Struett Co., B. F. 43 Sudler, E. and C. E. 43 Sullivan Construction Co. 32 Sullivan Machinery Co. 33 Swan Electric Co. 112 Sydnor Pump & Well Co. 107 Syracuse Chilled Flow Co. 5	U Ulmer Leather Co. 16 Underfed Stoker Co., The 8 Underwood & Co., H. B. 86 Union Iron Works Co. 86 Union Mining Co
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